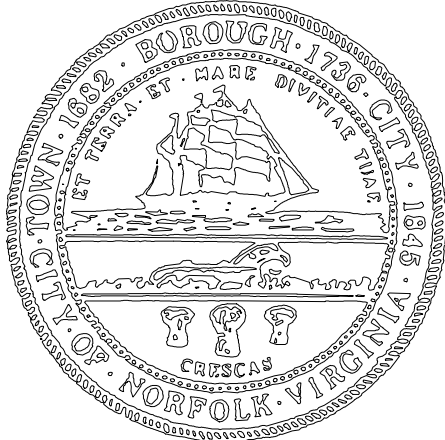


ELEVATOR RENOVATIONS AT BOUSH STREET PARKING GARAGE

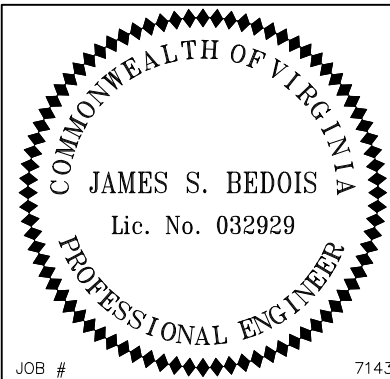
INDEX OF DRAWINGS	
SHEET No.	SHEET TITLE
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G3	GENERAL ELEVATOR #1 AND #2 MACHINE RM PLAN-EXISTING
G4	GENERAL ELEVATOR #3 MACH RM & PIT PLAN-DEMOLITION
G5	GENERAL ELEVATOR #3 MACH RM & PIT PLAN-NEW WORK
G6	ELEVATOR SECTIONS
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M1	MECHANICAL LEGEND, GENERAL NOTES
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E5	ELEC ELEV #1 & #2 PIT PLAN-DEMOLITION
E6	ELEC ELEV #3 MACHINE RM & PIT-DEMOLITION
E7	ELEC ELEV #1 & #2 MACHINE RM-DEMOLITION
E8	ELEC ELEV #1 & #2 PIT PLAN-NEW WORK
E9	ELEC ELEV #1 & #2 MACHINE RM-NEW WORK
E10	ELEC ELEV #3 MACHINE RM & PIT-NEW WORK
E11	ELECTRICAL LIGHTING DETAILS



PREPARED FOR:
CITY OF NORFOLK, VIRGINIA
PREPARED BY:
PACE COLLABORATIVE, P.C.
MECHANICAL / ELECTRICAL ENGINEERS

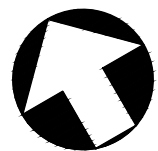
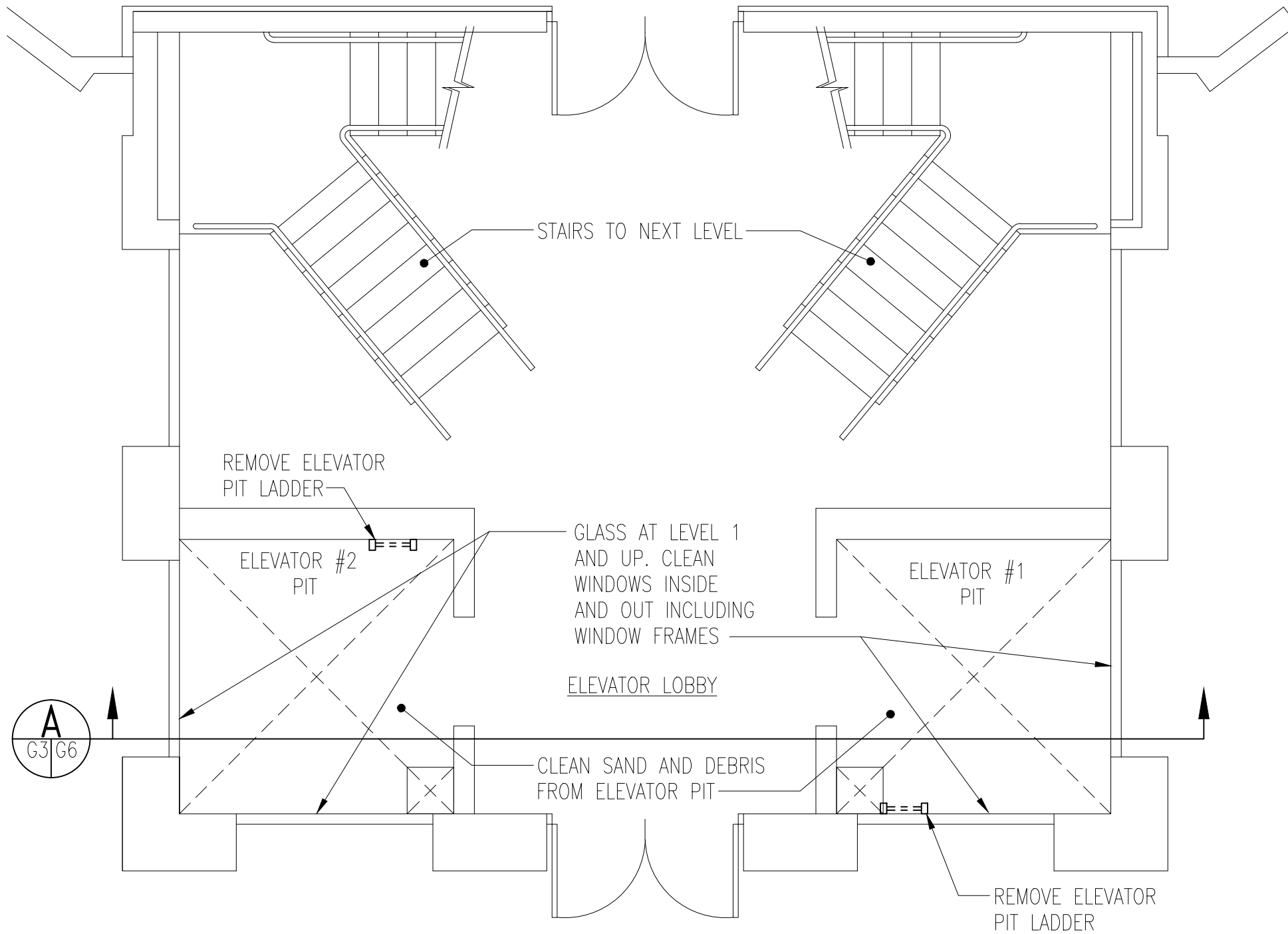
SPECIAL NOTES

- CONTRACTOR SHALL NOT HAVE USE OF OWNERS RESTROOM FACILITIES AND SHALL PROVIDE FACILITIES FOR ALL CONSTRUCTION RELATED WORKERS ETC.
- CONTRACTOR SHALL UTILIZE A PROFESSIONAL WINDOW CLEANING COMPANY AND CLEAN THE WINDOWS OF THE HOISTWAY AND ELEVATOR CAR.
- CONTRACTOR SHALL PROVIDE SIGNS THAT INFORM PATRONS OF THE GARAGE THAT ELEVATORS ARE OUT OF SERVICE. TWO SIGNS SHALL BE PLACED AT THE DRIVE ENTRANCE AND ONE SHALL BE PLACED AT PERSONAL ENTRANCES. THE SIGNS SHALL BE 18"x24" MINIMUM CONSTRUCTED OF REFLECTIVE ALUMINUM PER ASTM D4956 YELLOW WITH BLACK LETTERS. SIGNS SHALL INDICATE AS FOLLOWS; "ELEVATOR #_ IS OUT OF SERVICE". ADDITIONALLY A SIGN SHALL BE PLACED AT THE INTERIOR ELEVATOR LOBBY ENTRANCE AT EACH FLOOR.



BUILDING NAME: BOUSH STREET PARKING GARAGE
STREET ADDRESS: 112 WEST CITY HALL AVENUE
OCCUPANCY TYPE: S-2
APPLICABLE CODES TO PROJECT: CURRENT NFPA 72; NEC (NFPA 70); ASME A17.1; IBC
SCOPE OF WORK: MODERNIZE THE THREE (3) ELEVATORS OF THE BOUSH STREET PARKING GARAGE BY IMPROVING HVAC, ELECTRICAL, AND FIRE ALARM SERVICE; REPLACING HYDRAULIC EQUIPMENT ASSOCIATED WITH ELEVATOR #3; MODIFICATIONS TO TRACTION ELEVATORS #1 AND #2, INCLUDING, BUT NOT LIMITED TO: UPGRADING CAR AND HALL OPERATING STATIONS, ADDING CAR TOP VENTILATION FANS, RECONDITIONING CAR INTERIOR FINISHES, PROVIDING NEW FLOORING, CLEAN ELEVATOR SHAFTS AND OTHER ASSOCIATED MODIFICATIONS AS REQUIRED BY THE DRAWINGS, SPECIFICATIONS, OR APPLICABLE CODES.
PHASING:
THE WORK ASSOCIATED WITH EACH ELEVATOR SHALL BE ACCOMPLISHED TO AFFORD ONLY ONE ELEVATOR OUT OF SERVICE AT ANY TIME.

BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA		
TITLE SHEET		
DES.: TBG		DATE: 04-23-12
DR.: JMW		SHEET: G1
CK.: GML		



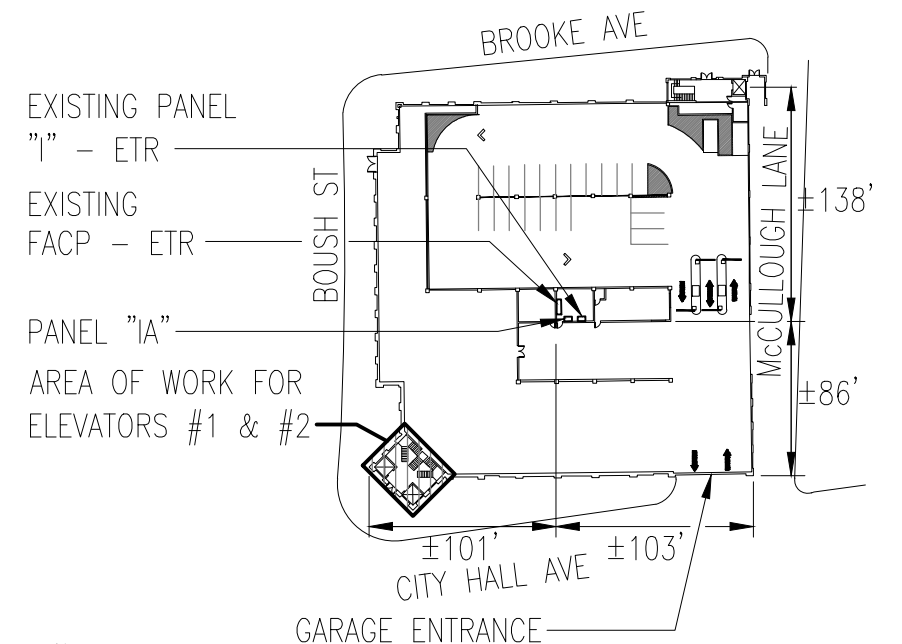
GENERAL ELEVATOR #1 AND #2 PIT PLAN – DEMOLITION

SCALE: 1/4" = 1'-0"



KEYPLAN – LEVEL 1

NO SCALE



GRAPHIC SCALE

1/4" = 1'-0" 

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

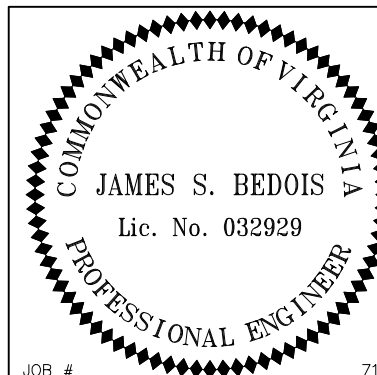
GENERAL ELEVATOR #1 AND #2 PIT PLAN – DEMOLITION

DES.: JMW
DR.: JMW
CK.: GML



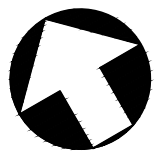
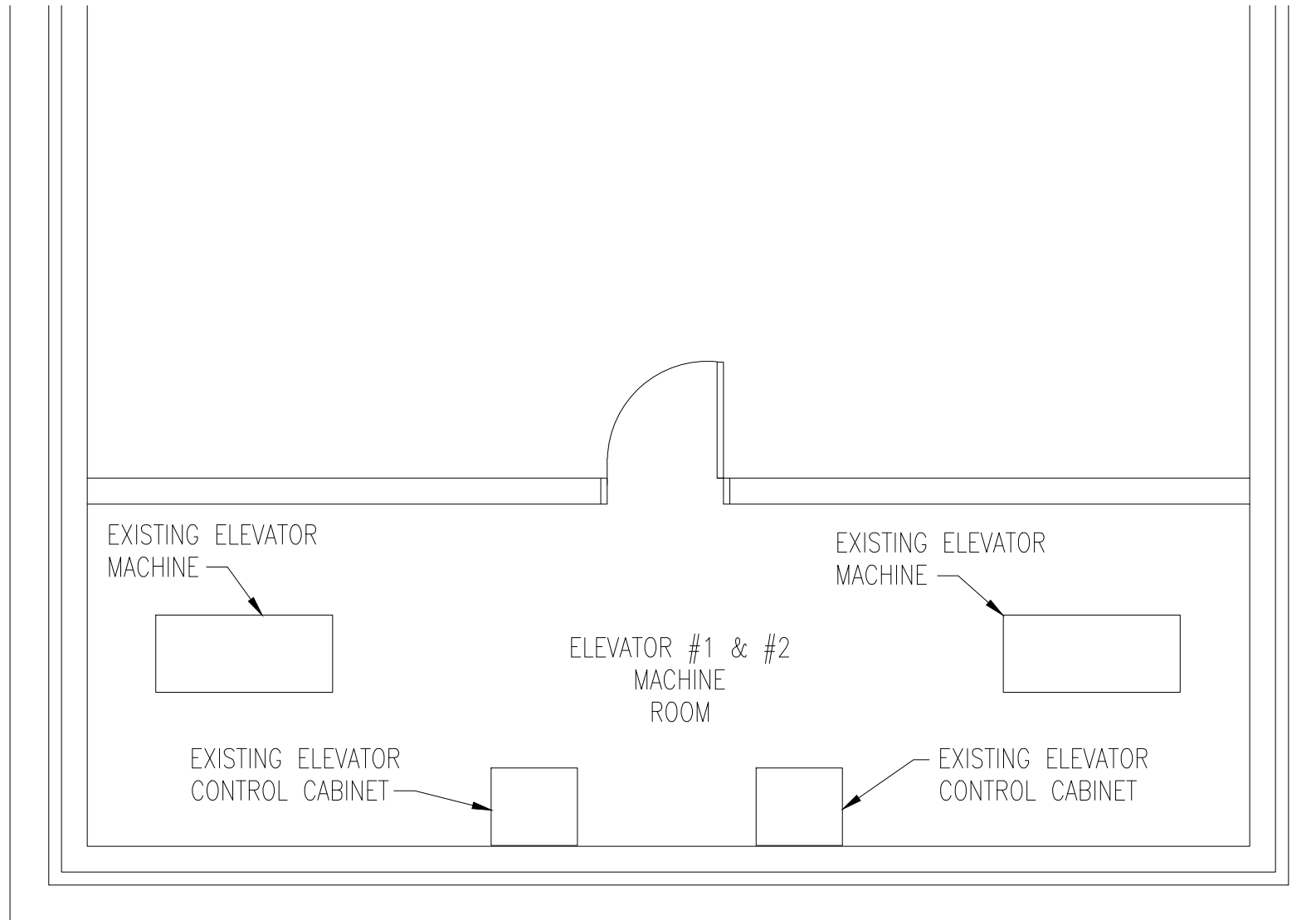
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DATE: 04-23-12
SHEET: **G2**



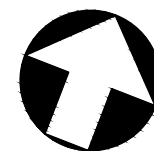
JOB #

7143



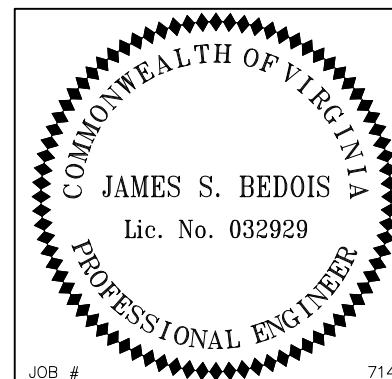
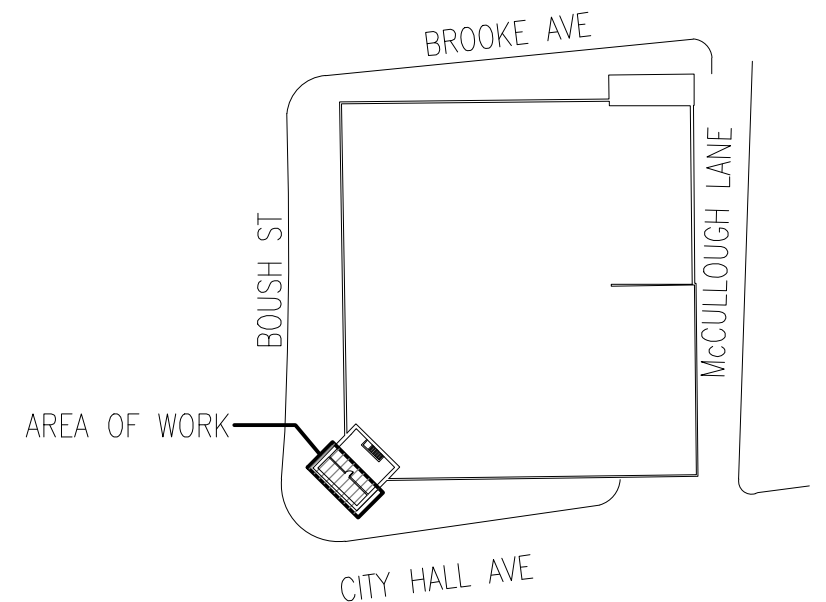
GENERAL ELEVATOR #1 AND #2 MACHINE RM PLAN – EXISTING

SCALE: 1/4" = 1'-0"



KEYPLAN – LEVEL 8

NO SCALE



JOB #

7143

GRAPHIC SCALE



**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

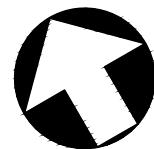
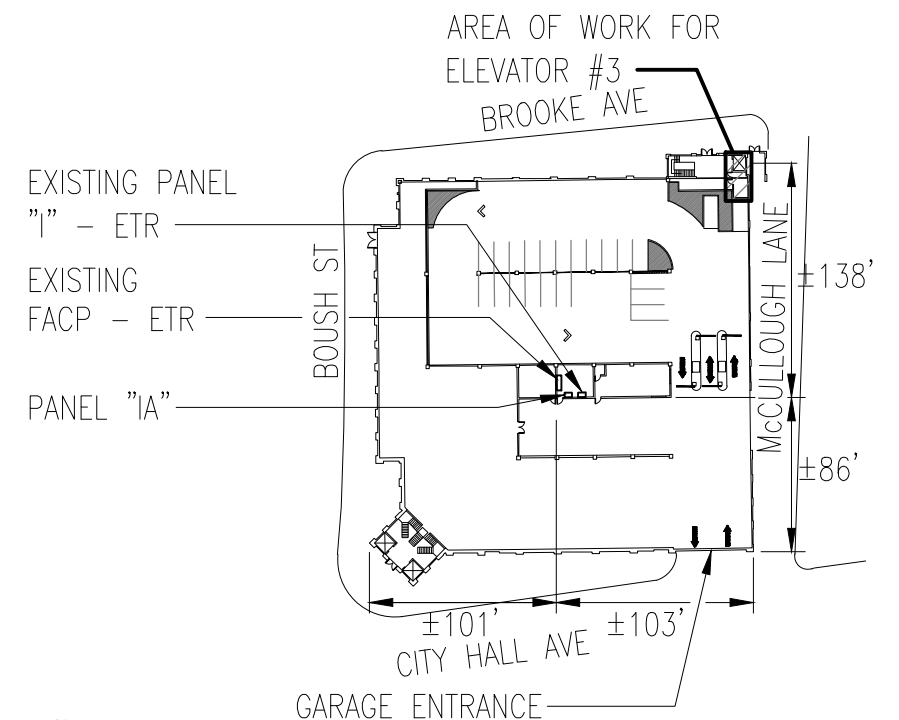
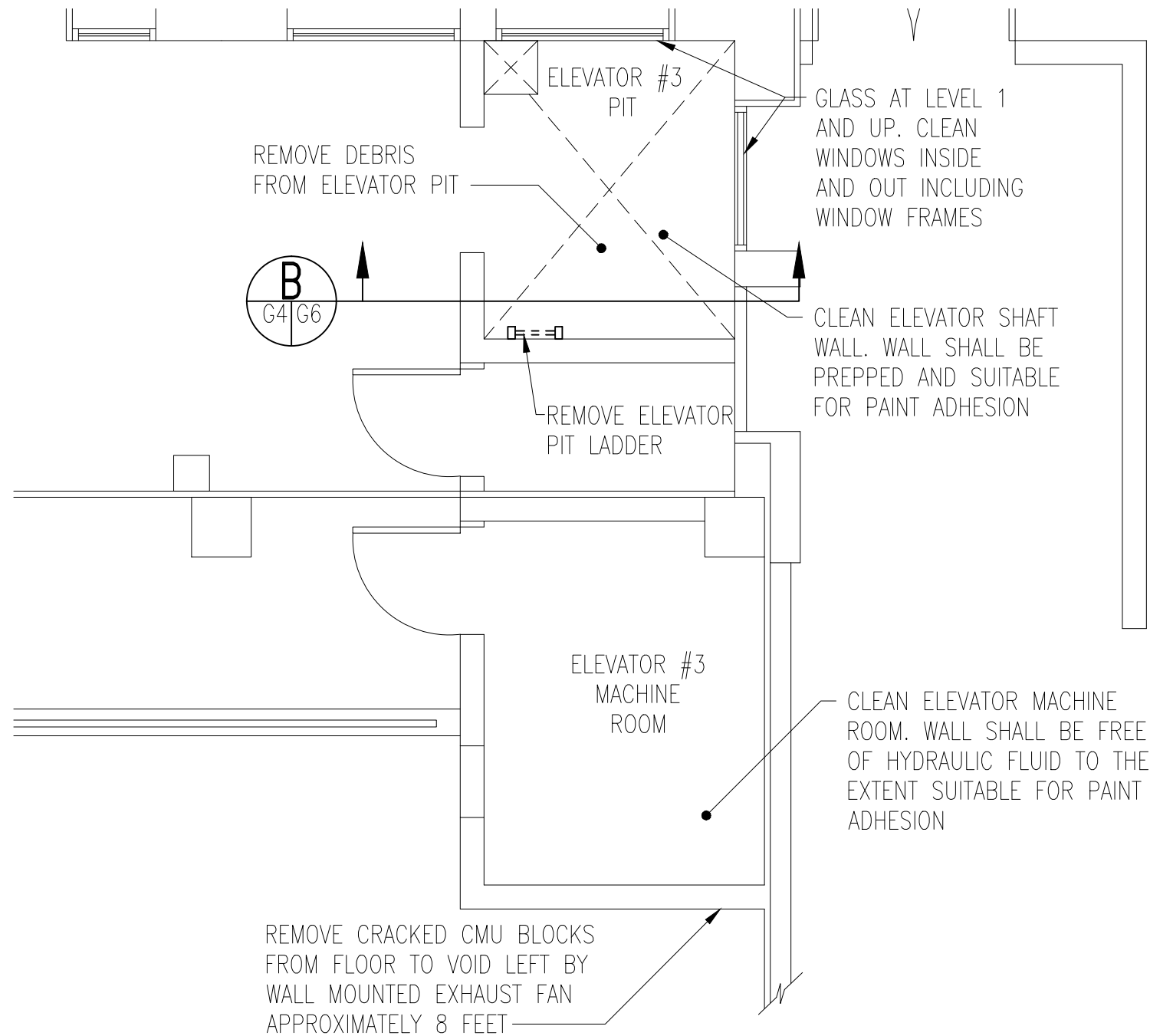
GENERAL ELEVATOR #1 AND #2 MACHINE RM PLAN – EXISTING

DES.: JMW
DR.: JMW
CK.: GML



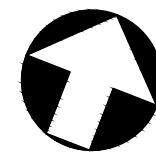
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DATE: 04-23-12
SHEET: G3



GENERAL ELEVATOR #3 MACHINE RM & PIT PLAN – DEMOLITION

SCALE: 1/4" = 1'-0"



KEYPLAN – LEVEL 1

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0" 5' 0' 5'

BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA

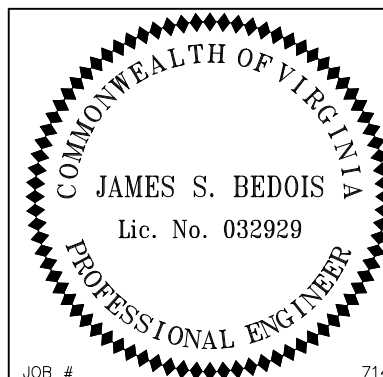
GENERAL ELEVATOR #3 MACH RM & PIT PLAN – DEMOLITION

DES.: TBG
DR.: JMW
CK.: GML



1277 PERIMETER PKWY., - VIRGINIA BEACH, VA.
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DATE: 04-23-12
SHEET: G4



JOB #

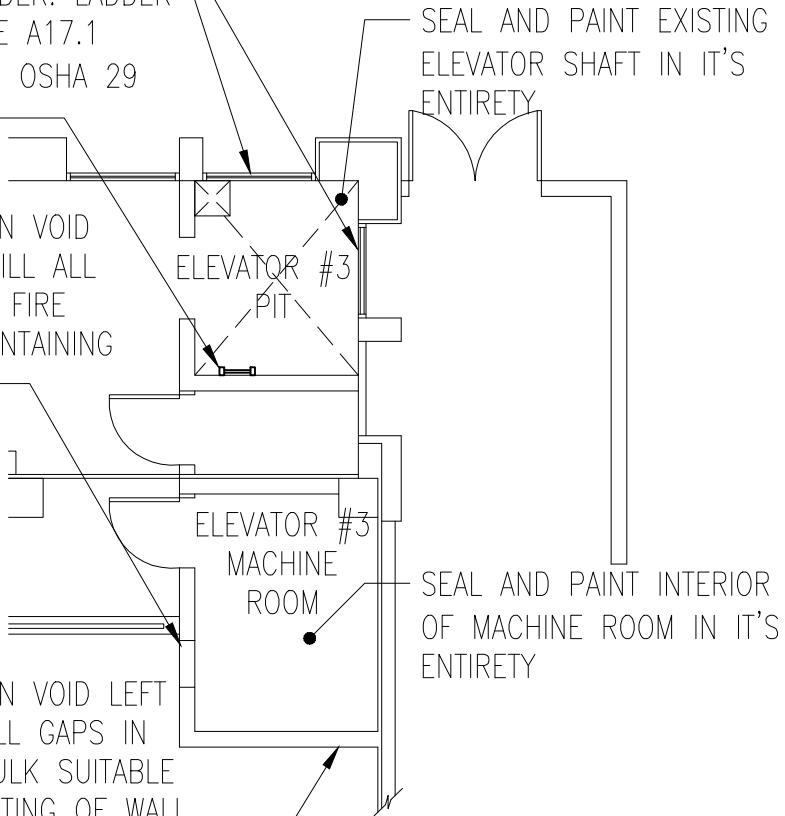
7143

GLASS AT LEVEL 1 AND UP. CLEAN
WINDOWS INSIDE AND OUT INCLUDING
WINDOW FRAMES

PROVIDE PIT ACCESS LADDER. LADDER
SHALL CONFORM TO ASME A17.1
(2.24.2), ANSI A14.4 AND OSHA 29
CFR 1910.27 (C)(4)

TOOTH IN CMU BLOCKS IN VOID
LEFT BY WALL LOUVER. FILL ALL
GAPS IN CMU WALL WITH FIRE
CAULK SUITABLE FOR MAINTAINING
FIRE RATING OF WALL

TOOTH IN CMU BLOCKS IN VOID LEFT
BY EXHAUST FAN. FILL ALL GAPS IN
CMU WALL WITH FIRE CAULK SUITABLE
FOR MAINTAINING FIRE RATING OF WALL
APPROXIMATELY 8 FEET IN LENGTH



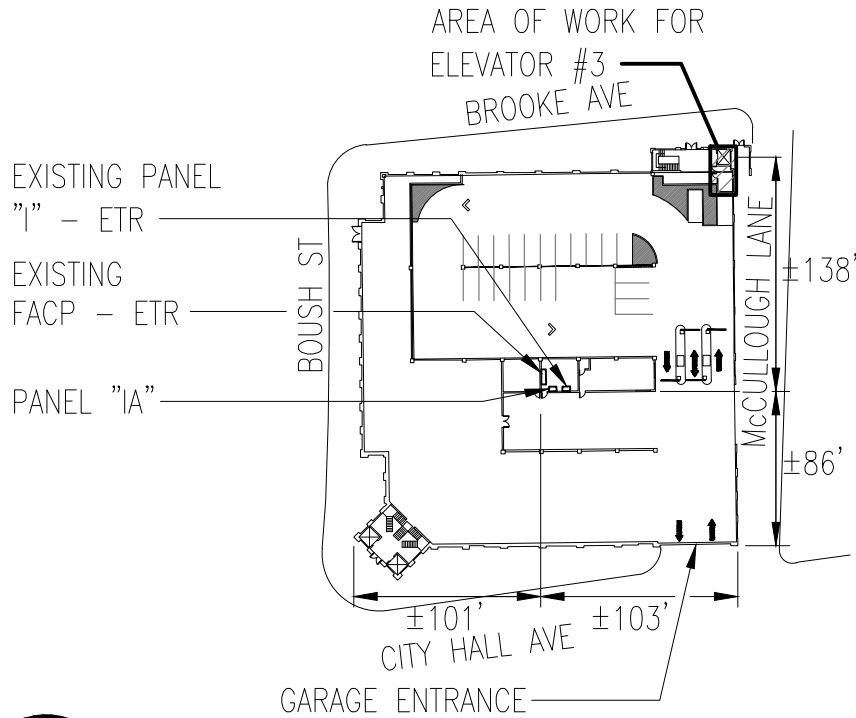
GENERAL ELEVATOR #3 MACH RM & PIT PLAN – NEW WORK

SCALE: 1/8" = 1'-0"

NOTE:
PROVIDE ALL NECESSARY LABOR AND MATERIAL TO
MODERNIZE EXISTING ELEVATORS #1, 2, AND 3. SELECTED
PARTS OF UNIT MAY BE RE-USED. SEE CONTRACT
SPECIFICATIONS SECTION 14 – FOR DETAILED SCOPE OF
WORK

PATCHING NOTE

PATCH AND PAINT ALL SURFACES AFFECTED BY
DEMOLITION WORK TO MATCH EXISTING ADJACENT
CONDITIONS. THIS INCLUDES, BUT IS NOT LIMITED
TO, ANCHOR AND SUPPORT HOLES LEFT IN WALLS
AND CEILINGS.



KEYPLAN – LEVEL 1

NO SCALE

GRAPHIC SCALE

1/8" = 1'-0" 5' 0' 5' 10'

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

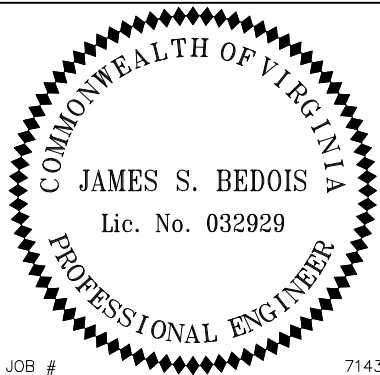
GENERAL ELEVATOR #3 MACH RM & PIT PLAN – NEW WORK

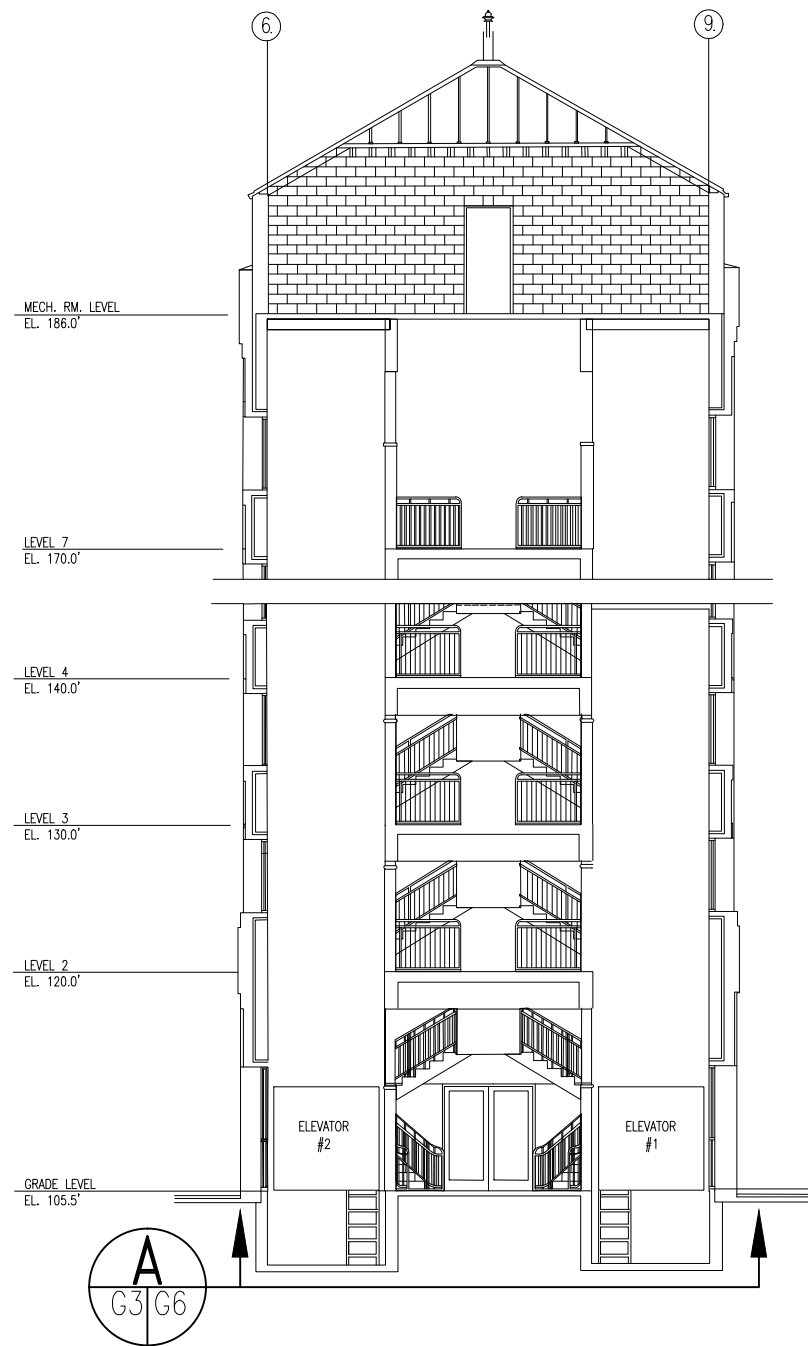
DES.: TBG
DR.: JMW
CK.: GML



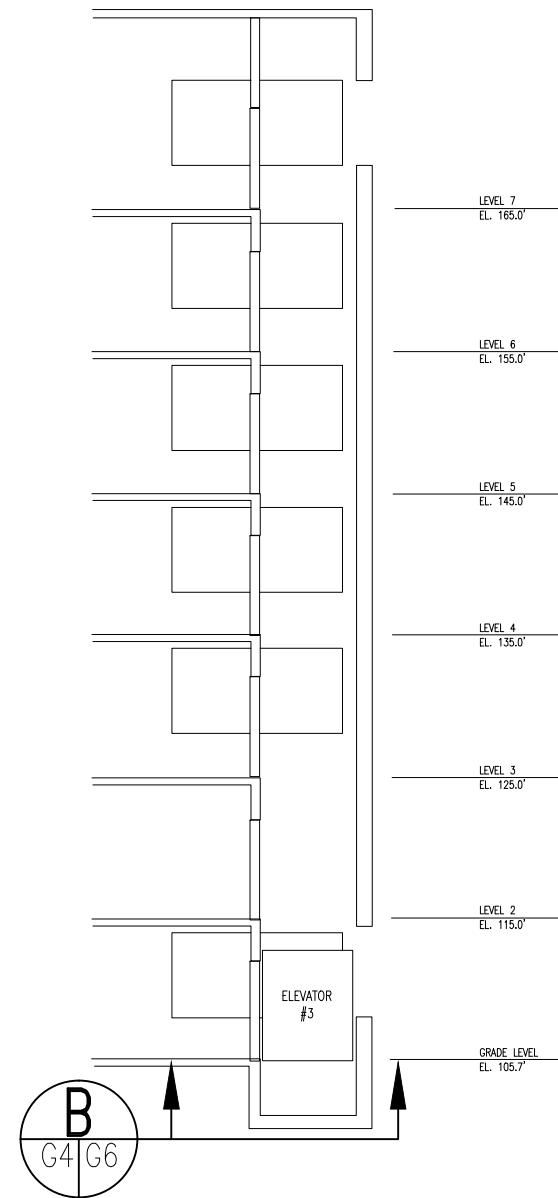
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DATE: 04-23-12
SHEET: G5





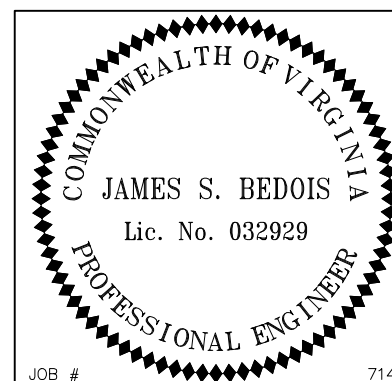
ELEVATORS #1 AND #2



ELEVATOR #3

ELEVATOR SECTIONS

NO SCALE



JOB #

7143

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

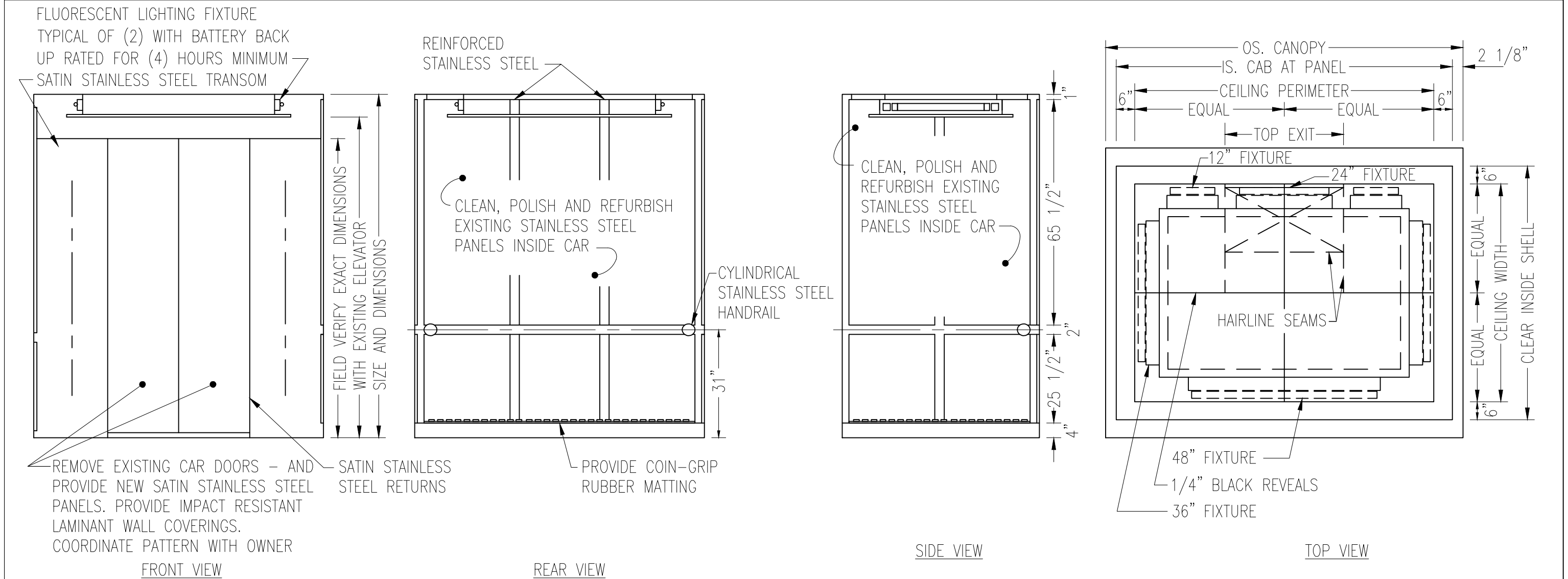
ELEVATOR SECTIONS

DES.: TBG
DR.: JMW
CK.: GML



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757-400-7220 - FAX 757-071-0702

DATE: 04-23-12
SHEET: G6



GENERAL NOTES:

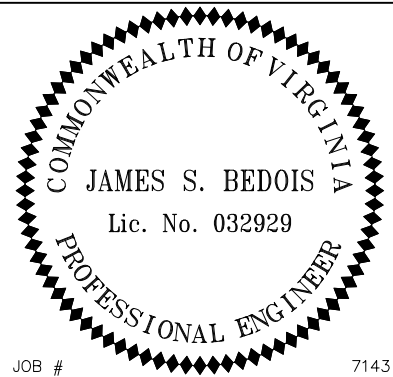
1. RENOVATE ELEVATOR CAB INTERIORS (TYPICAL) ACCORDING TO THE ELEVATOR CAR DETAILS AND ELEVATOR SPECIFICATIONS.
2. PROVIDE THE FOLLOWING ELEVATOR EQUIPMENT UPGRADES FOR ELEVATORS #1 AND #2: PROVIDE ELECTRONIC DOOR EDGES. PROVIDE HALL PUSHBUTTON STATIONS. PROVIDE GOVERNOR, OVERSPEED SWITCH, AND SEAL. PROVIDE NEW CAR OPERATION STATIONS, DIRECTIONAL ARROWS, AND GONGS. REPLACE CAR INTERIOR.
3. PROVIDE THE FOLLOWING ELEVATOR EQUIPMENT UPGRADES FOR ELEVATOR #3: REPLACE CAR INTERIOR AS INDICATED THIS SHEET. PROVIDE HYDRAULIC OPERATION EQUIPMENT. PROVIDE NEW CAR OPERATION STATIONS, DIRECTION ARROWS, AND GONGS. PROVIDE ELECTRIC DOOR EDGES. PROVIDE NEW CALL STATIONS.

TYPICAL ELEVATOR CAR DETAIL

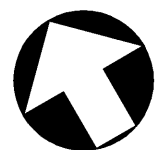
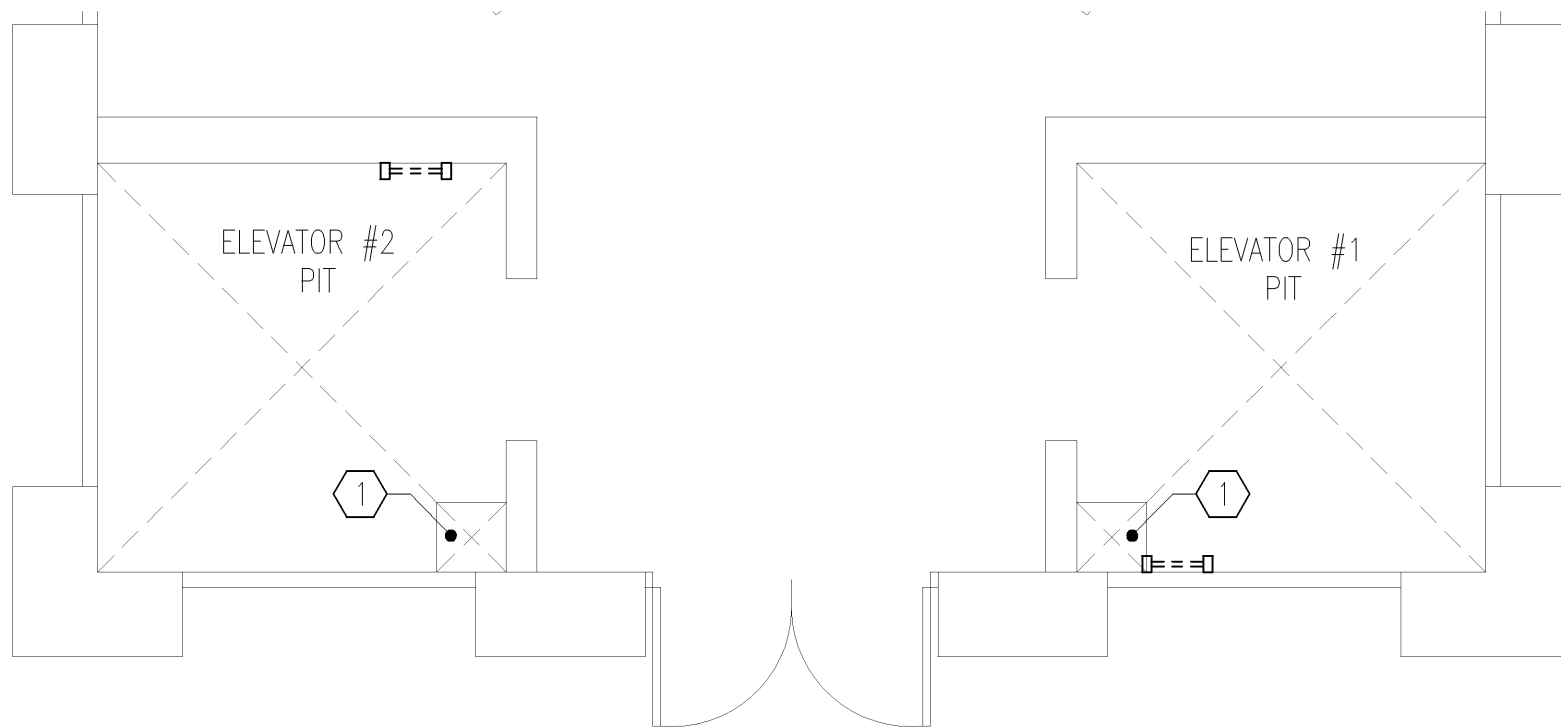
NO SCALE

NOTES:

1. LOCATE TOP EXIT TO SUIT CAR CONFIGURATION (TOWARDS REAR OF CAR). CEILING TO BE CONSTRUCTED OF 3/4" FIRE RATED PLYWOOD FACED WITH #4 SATIN FINISH STAINLESS STEEL AND TO CONTAIN THE REQUIRED REMOVABLE EXIT HATCH. ELEVATORS TO HAVE FOUR EQUAL CEILING PANE DESIGN. LIGHTING TO BE INDIRECT FLOURESCENT STRIP FIXTURES. ADJUST NUMBER/SIZE OF PERIMETER STRIP LIGHTS TO SUIT SIZE OF CAR.
2. DIMENSIONS ON DETAIL ARE APPROXIMATE. COORDINATE WITH EXISTING ELEVATOR HOISTWAY AND ELEVATOR CAR.
3. SEE SPECIFICATION FOR FURTHER INFORMATION.
4. PROVIDE CARTOP EXHAUST FAN. PROVIDE WITH BATTERY BACK-UP.

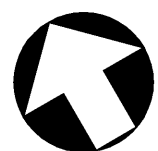
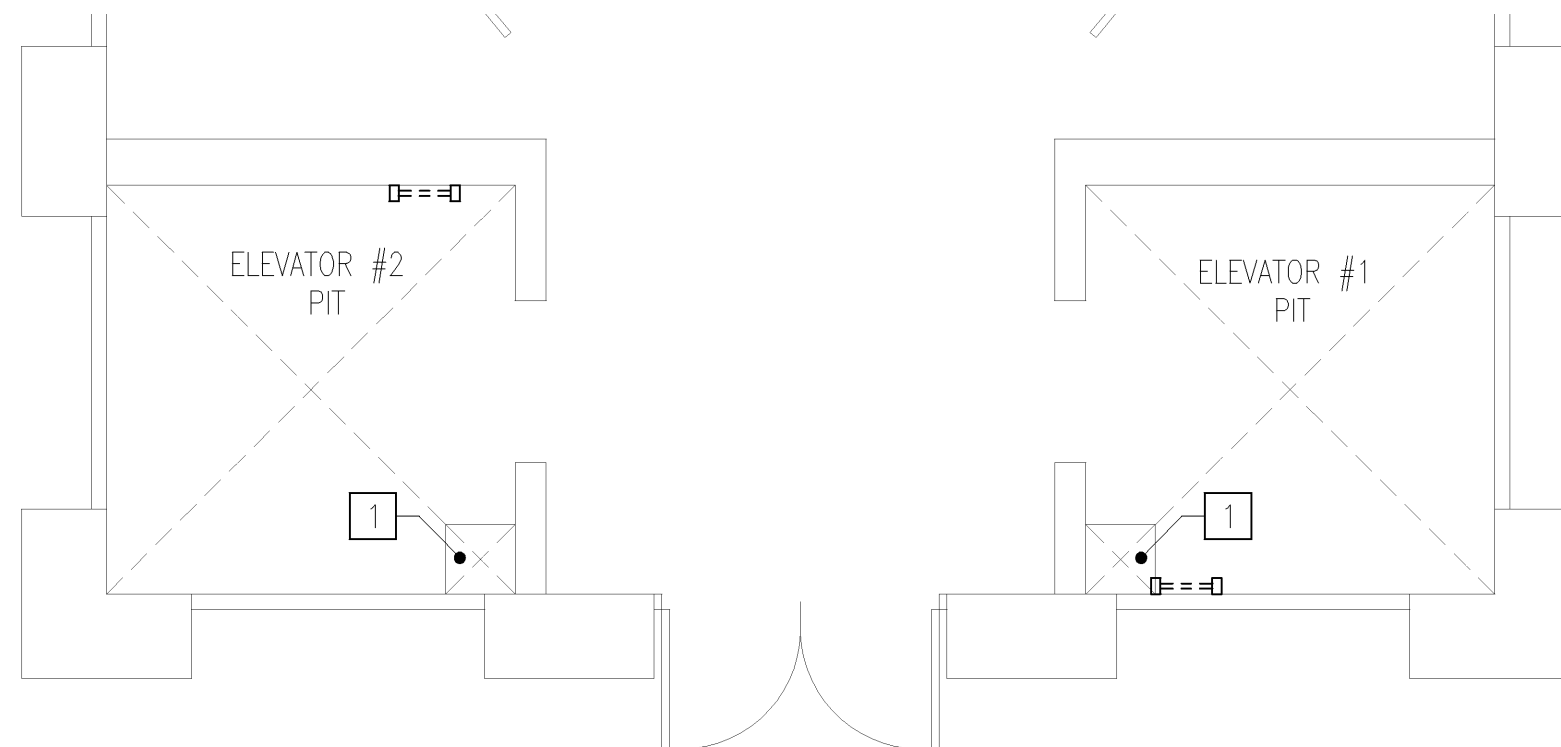


BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA		
ELEVATOR CAR DETAIL		
DES.: TBG	 1277 PERIMETER PKWY. - VIRGINIA BEACH, VA. 757-400-7229 - FAX 757-071-0702	DATE: 04-23-12
DR.: JMW		SHEET: G7
CK.: GML		



GENERAL ELEVATOR #1 AND #2 PIT PLAN – DEMOLITION

SCALE: 1/4" = 1'-0"



GENERAL ELEVATOR #1 AND #2 PIT PLAN – NEW WORK

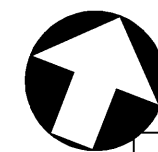
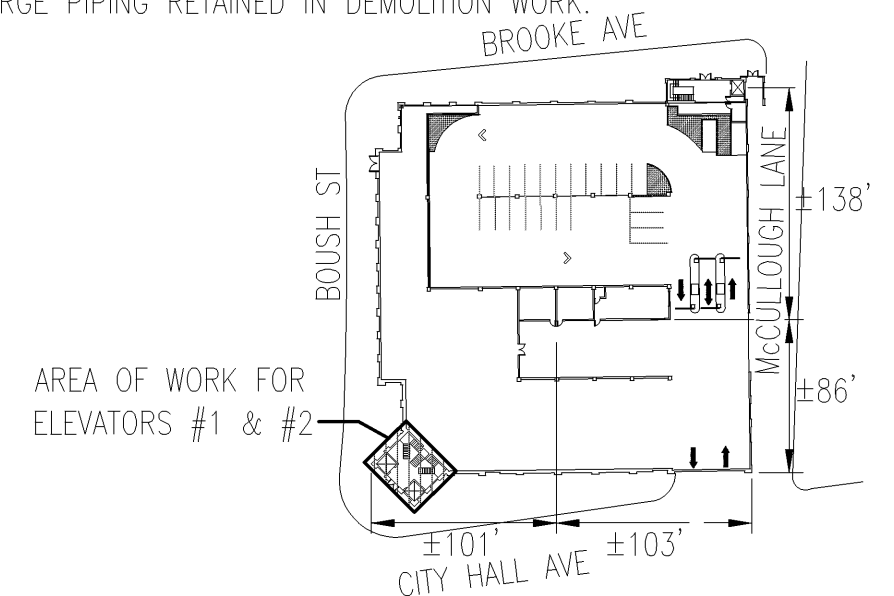
SCALE: 1/4" = 1'-0"

DEMOLITION WORK NOTES, THIS SHEET

- 1 REMOVE EXISTING SUMP PUMP COMPLETE. PREPARE EXISTING 1-1/2" PVC DISCHARGE PIPING AS REQUIRED TO CONNECT TO NEW SUMP PUMP. REFER TO NEW WORK PLAN THIS SHEET.

NEW WORK NOTES, THIS SHEET

- 1 PROVIDE NEW SUMP PUMP WITH OIL MINDER SYSTEM, ZOELLER OIL SMART SYSTEM 940-007 WITH PUMP 152. CONNECT PUMP DISCHARGE TO EXISTING 1-1/2" PVC DISCHARGE PIPING RETAINED IN DEMOLITION WORK.



KEYPLAN – LEVEL 1

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0" 5' 0' 5'

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

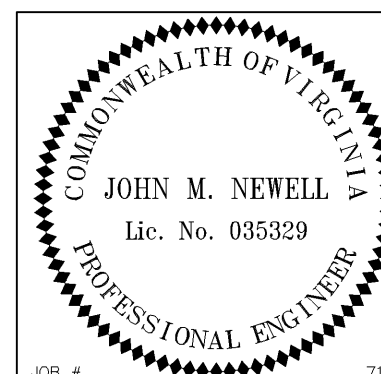
PLUMBING ELEVATOR #1 AND #2 PIT PLANS

DES.: JMW
DR.: JMW
CK.: GML



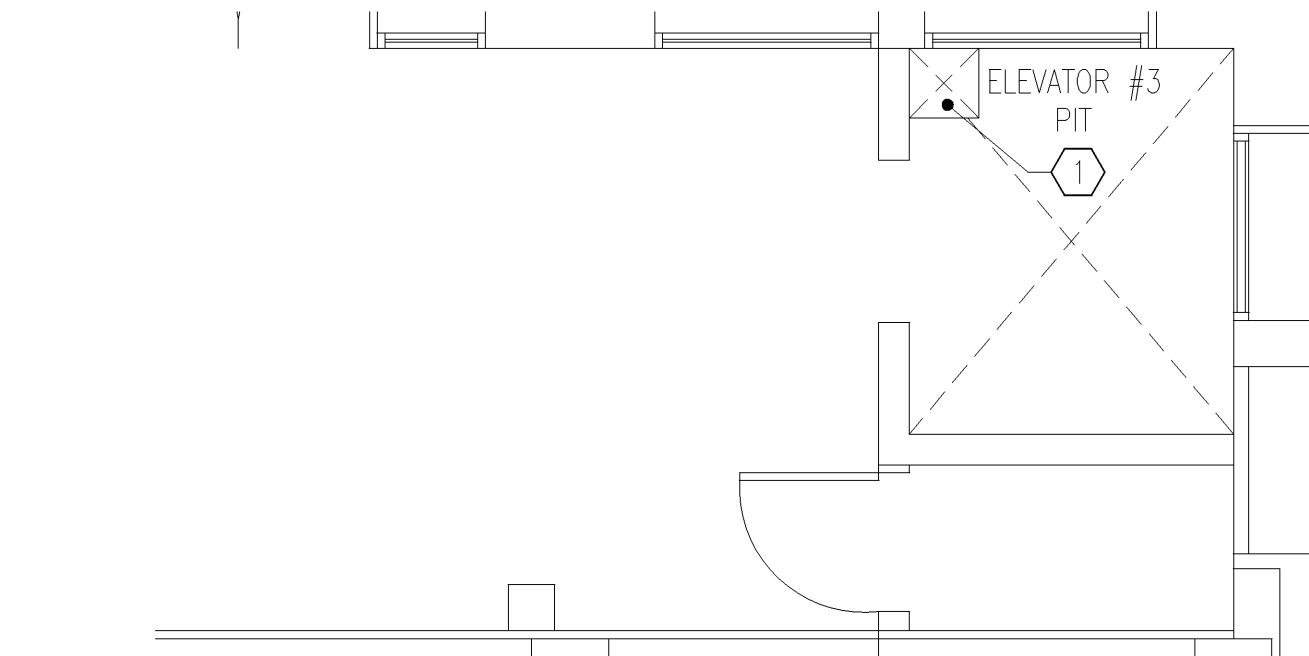
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757-466-7223 • FAX 757-471-8772

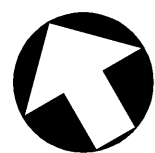
DATE: 04-23-12
SHEET: P1

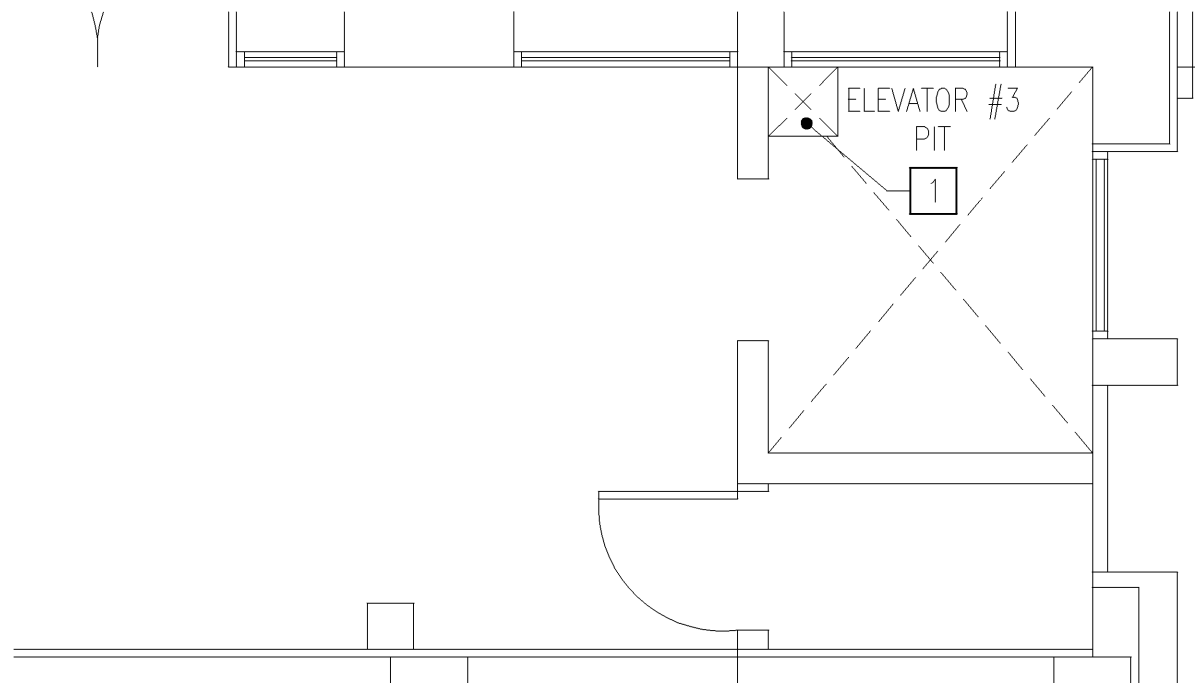


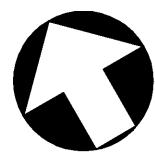
JOB #

7143



 **MECHANICAL ELEVATOR #3 MACHINE RM PLAN – DEMOLITION**
SCALE: 1/4" = 1'-0"



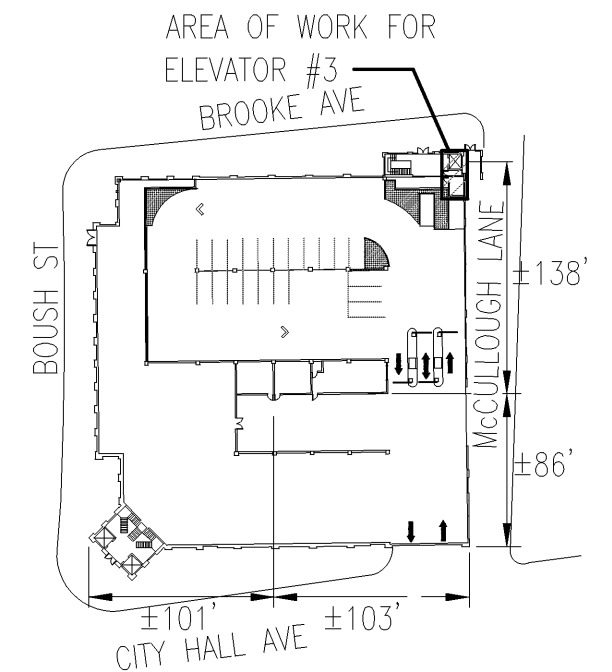
 **MECHANICAL ELEVATOR #3 MACHINE RM PLAN – NEW WORK**
SCALE: 1/4" = 1'-0"

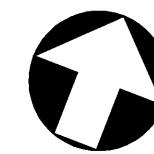
DEMOLITION WORK NOTES, THIS SHEET

- 1 REMOVE EXISTING SUMP PUMP COMPLETE. PREPARE EXISTING 1-1/2" PVC DISCHARGE PIPING AS REQUIRED TO CONNECT TO NEW SUMP PUMP. REFER TO NEW WORK PLAN THIS SHEET.

NEW WORK NOTES, THIS SHEET

- 1 PROVIDE NEW SUMP PUMP WITH OIL MINDER SYSTEM, ZOELLER OIL SMART SYSTEM 940-007 WITH PUMP 152. CONNECT PUMP DISCHARGE TO EXISTING 1-1/2" PVC DISCHARGE PIPING RETAINED IN DEMOLITION WORK.



 **KEYPLAN – LEVEL 1**
NO SCALE

GRAPHIC SCALE

1/4" = 1'-0" 

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

MECHANICAL ELEVATOR #3 MACHINE RM PLANS

DES.: JPH

DR.: JPH

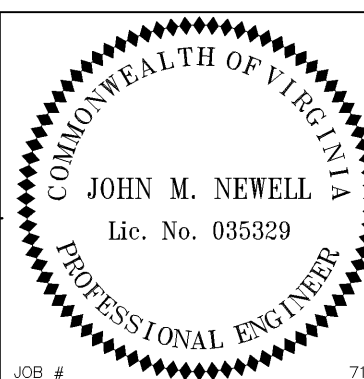
CK.: JMN



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DATE: 04-23-12

SHEET: P2



JOB #

7143

GENERAL NOTES

GENERAL ITEMS

GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH HVAC DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC NOTES APPLICABLE TO THAT DRAWING.

CONTRACTOR SHALL VERIFY REFRIGERANT PIPE SIZES WITH EQUIPMENT MANUFACTURER FOR THE INDICATED INSTALLATION.

COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.

PIPING EXTENDING THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WEATHERPROOF MANNER.

PIPING INSULATION SHALL BE RUN CONTINUOUSLY THROUGH NON-RATED FLOORS, WALLS, ROOF AND PARTITIONS, UNLESS OTHERWISE INDICATED.

LEGEND and ABBREVIATIONS

<div>1</div>	NEW WORK NOTE DESIGNATION
DSS-1	DUCTLESS SPLIT SYSTEM DESIGNATION
<div><div></div><div></div></div>	DIRECTION OF PITCH DOWN
<div>D</div>	CONDENSATE DRAIN
<div><div></div><div></div></div>	PIPE TURNING UP
<div>G</div>	PIPE TURNING DOWN
<div></div>	PIPE SLEEVE
<div>RL</div>	REFRIGERANT LIQUID PIPING
<div>RS</div>	REFRIGERANT SUCTION PIPING
AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATELY
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
IN	INCH
KW	KILOWATT
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MIN CIRCUIT AMPACITY
MFS	MAX. FUSE SIZE
MIN	MINIMUM
O.C.	ON CENTER
P.D.	PRESSURE DROP
RPM	REVOLUTIONS PER MINUTE
WB	WET BULB TEMPERATURE
∅	PHASE/DIAMETER
°F	DEGREE FAHRENHEIT
W.G.	WATER GAUGE

COMMONWEALTH OF VIRGINIA

JOHN M. NEWELL

Lic. No. 035329

PROFESSIONAL ENGINEER

JOB #

7143

BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA

MECHANICAL LEGEND, GENERAL NOTES

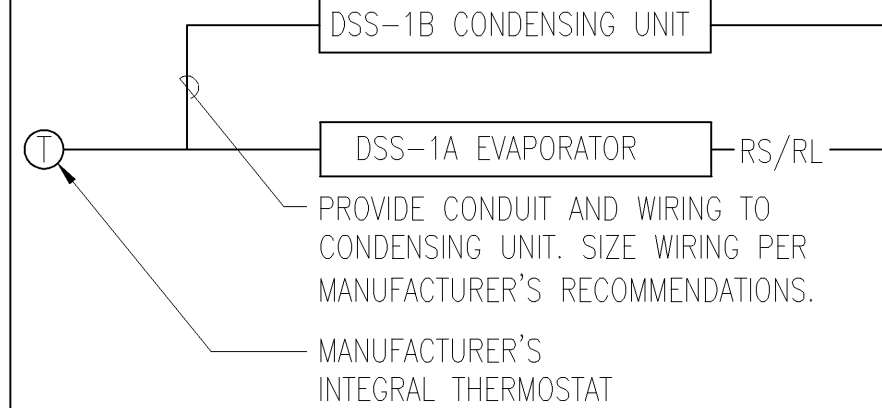
DES.:	JPH	<div><div><div></div><div>DATE: 04-23-12</div></div><div><div></div><div>SHEET: M1</div></div></div>
DR.:	JPH	
CK.:	JMN	

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MECHANICAL ELECTRICAL ENGINEERS

DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE										
MARK INDOOR UNIT	COOLING CAPACITY	COIL E.A.T. • F. db/ • F. wb	FAN DATA		MARK OUTDOOR UNIT	ELECTRIC DATA OUTDOOR UNIT				REMARKS
	MBH		MOTOR (WATTS)	HEATER (KW) CAPACITY		M.C.A.	M.O.C.P.	VOLTS	Ø	
	TOTAL									
DSS-1A	18	75/62	40	3	DSS-1B	9.5	15	208	1	SEE NOTES

- NOTES:
- EQUIPMENT SELECTIONS BASED ON EMI HEAT PUMP UNIT MODELS KWH
 - COOLING CAPACITIES BASED ON ENTERING AIR TEMPERATURES LISTED AND 95°F OUTSIDE AIR TEMPERATURE. HEATING CAPACITIES BASED ON 22°F OUTSIDE AIR TEMPERATURES.
 - PROVIDE TAMPER PROOF SUPPORT AND ENCLOSURE FOR OUTDOOR UNIT. SEE DETAIL ON SHEET M4.
 - PROVIDE SLIMLINE PROFILE FOR CONDENSING UNIT.
 - INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. SINGLE POINT CONNECTION



DSS-1A AND DSS-1B (NON-DDC)

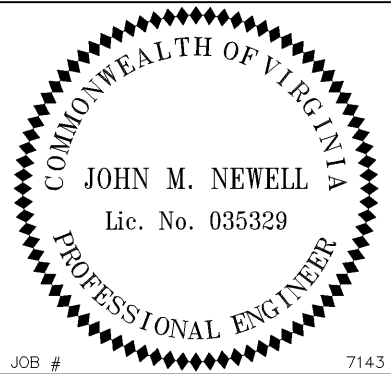
NO SCALE

SEQUENCE OF OPERATION

COOLING: UNIT SHALL BE CONTROLLED BY THE MANUFACTURER’S INTEGRAL THERMOSTAT. WHEN THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT (75°F), THE THERMOSTAT SHALL ENERGIZE THE DSS UNITS HEAT PUMP CYCLE AND ENERGIZE THE INDOOR UNIT SUPPLY FAN. WHEN THE SPACE TEMPERATURE DROPS BELOW THE THERMOSTAT SETPOINT, THE OPPOSITE SHALL OCCUR.

HEATING: UNIT SHALL BE CONTROLLED BY MANUFACTURER’S INTEGRAL THERMOSTAT. WHEN THE SPACE TEMPERATURE DROPS BELOW 65°F THE THERMOSTAT SHALL ENERGIZE THE DSS UNITS HEAT PUMP CYCLE AND ENERGIZE THE INDOOR SUPPLY FAN. UPON A CONTINUED FALL IN SPACE TEMPERATURE, THE ELECTRIC HEATING COIL SHALL BE ENERGIZED. UPON A RISE IN SPACE TEMPERATURE ABOVE 68°F THE OPPOSITE SHALL OCCUR.


CONTROLS

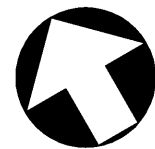
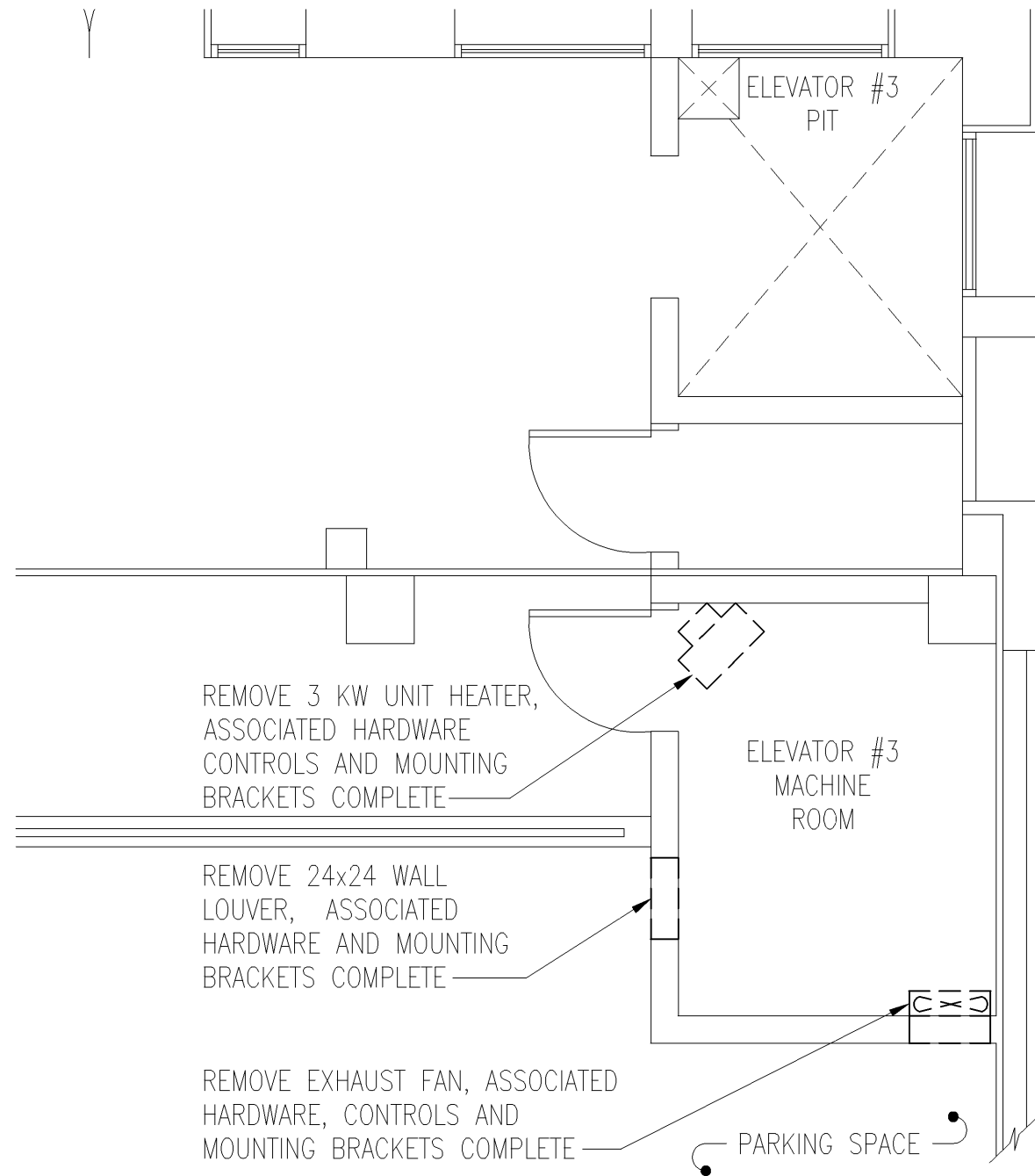


JOB #7143

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

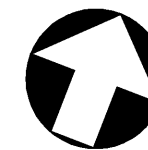
MECHANICAL SCHEDULE AND CONTROLS

DES.:	JPH	 <div>1277 PERIMETER PKWY. • VIRGINIA BEACH, VA 757-496-7225 • FAX 757-471-4772</div>	DATE: 04-23-12
DR.:	JPH		SHEET: M2
CK.:	JMN		



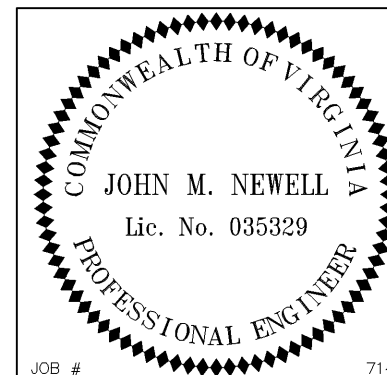
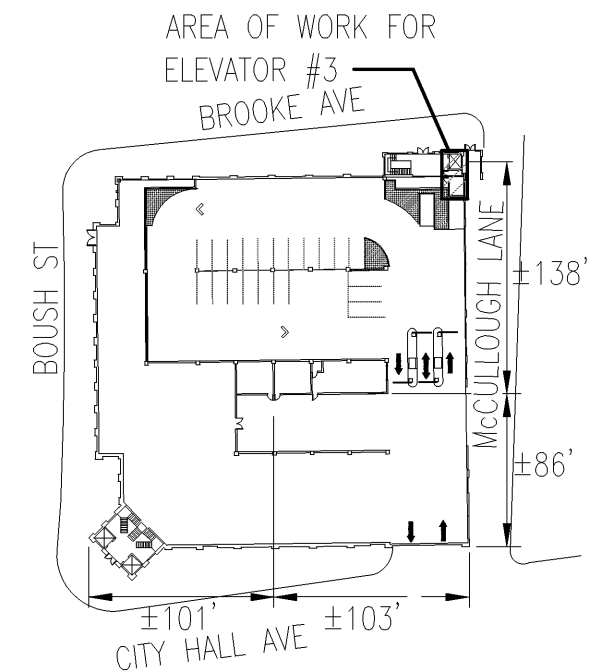
MECHANICAL ELEVATOR #3 MACHINE RM PLAN – DEMOLITION

SCALE: 1/4" = 1'-0"



KEYPLAN – LEVEL 1

NO SCALE



JOB #

7143

GRAPHIC SCALE



**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

MECHANICAL ELEVATOR #3 MACHINE RM PLAN – DEMOLITION

DES.: JPH

DR.: JPH

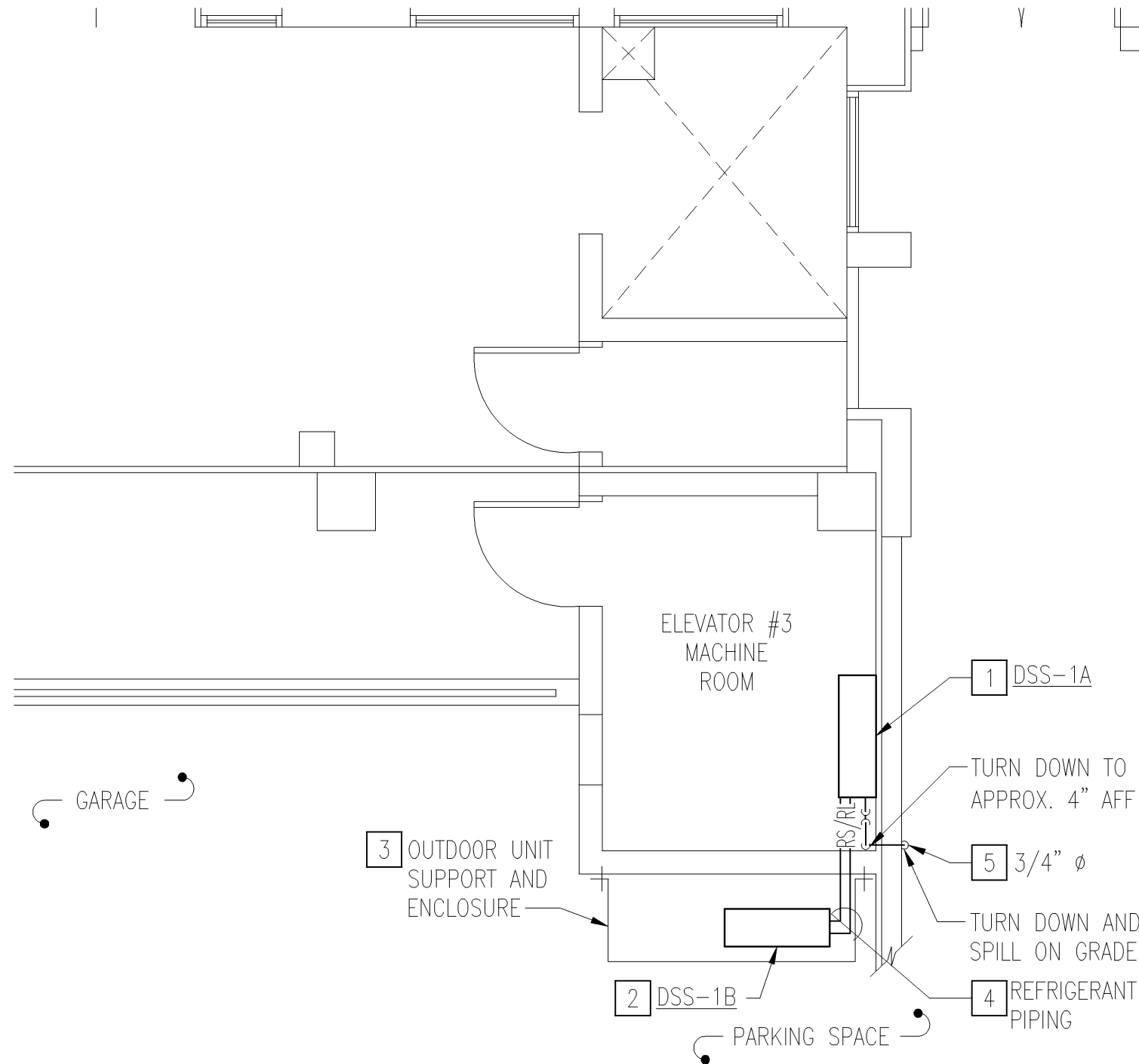
CK.: JMN



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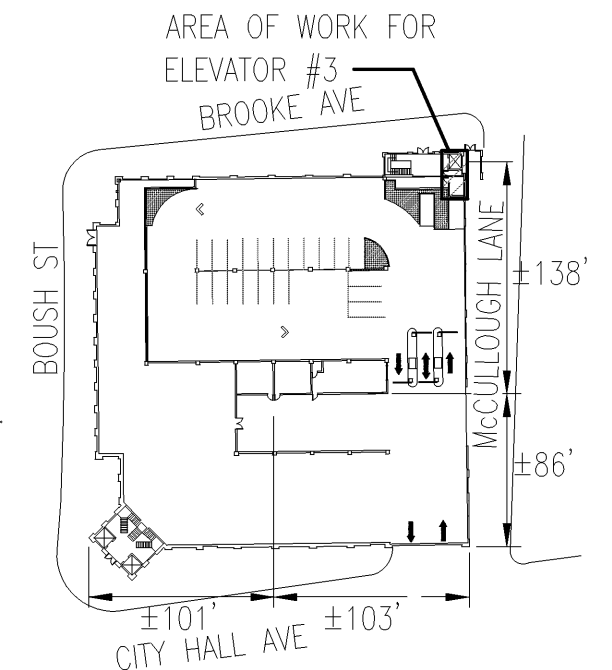
DATE: 04-23-12

SHEET: M3



NOTES THIS SHEET

- 1 INSTALL INDOOR HEAT PUMP UNIT DSS-1A WITH ALL ASSOCIATED HARDWARE AND MOUNTING BRACKET ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MOUNT TOP 12" BELOW OVERHEAD STRUCTURE.
- 2 INSTALL OUTDOOR HEAT PUMP UNIT DSS-1B WITH ALL ASSOCIATED HARDWARE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MOUNT AS TIGHT AS POSSIBLE TO OVERHEAD STRUCTURE.
- 3 FABRICATE AND INSTALL TAMPER RESISTANT OUTDOOR HEAT PUMP UNIT SUPPORT AND ENCLOSURE. SEE DETAIL ON SHEET M5. COORDINATE ACCESS DOORS, CLEARANCES, AND PHYSICAL SIZE WITH ACTUAL EQUIPMENT PURCHASED.
- 4 PROVIDE REFRIGERANT PIPING, INSULATION, HANGERS AND SUPPORTS COMPLETE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ROUTE AS HIGH AS POSSIBLE TIGHT TO WALLS AND STRUCTURE.
- 5 PROVIDE COPPER DRAIN PIPING, INSULATION, HANGERS AND SUPPORTS COMPLETE. ROUTE TIGHT TO WALL.



KEYPLAN - LEVEL 1

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0" 5' 0' 5'

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

MECHANICAL ELEVATOR #3 MACHINE RM PLAN - NEW WORK

DES.: JPH

DR.: JPH

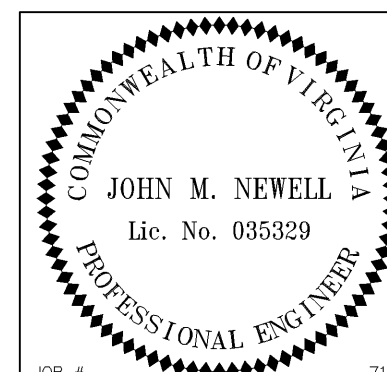
CK.: JMN



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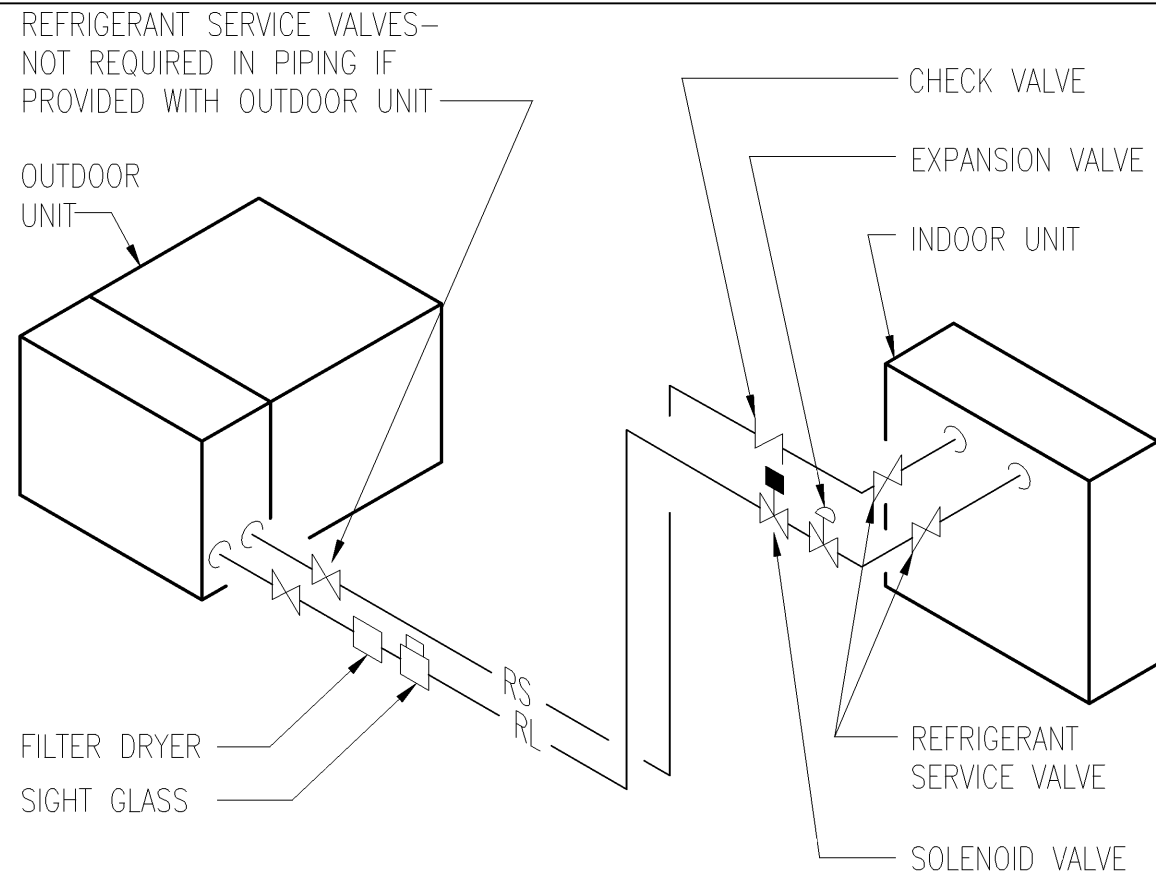
DATE: 04-23-12

SHEET: M4



JOB #

7143

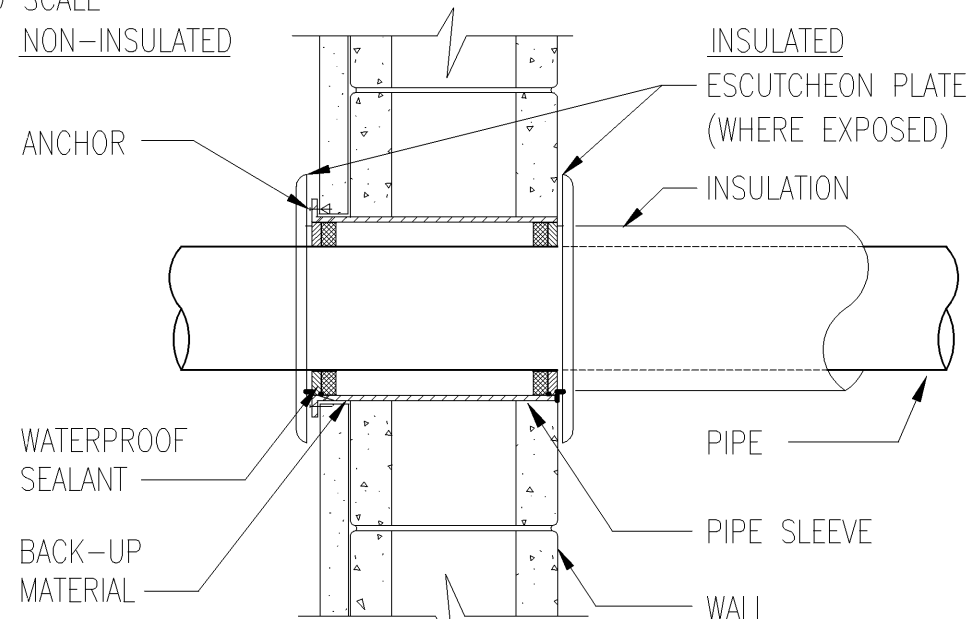


NOTE: PROVIDE CHARGING CONNECTIONS AND SERVICE PORTS
WHERE RECOMMENDED BY THE MANUFACTURER.

REFRIGERANT PIPING DETAIL

NO SCALE

NON-INSULATED



NOTE: PRIME AND PAINT SUPPORTS, INSULATION AND ESCUTCHEON TO
MATCH EXISTING ADJACENT WALL CONDITIONS.

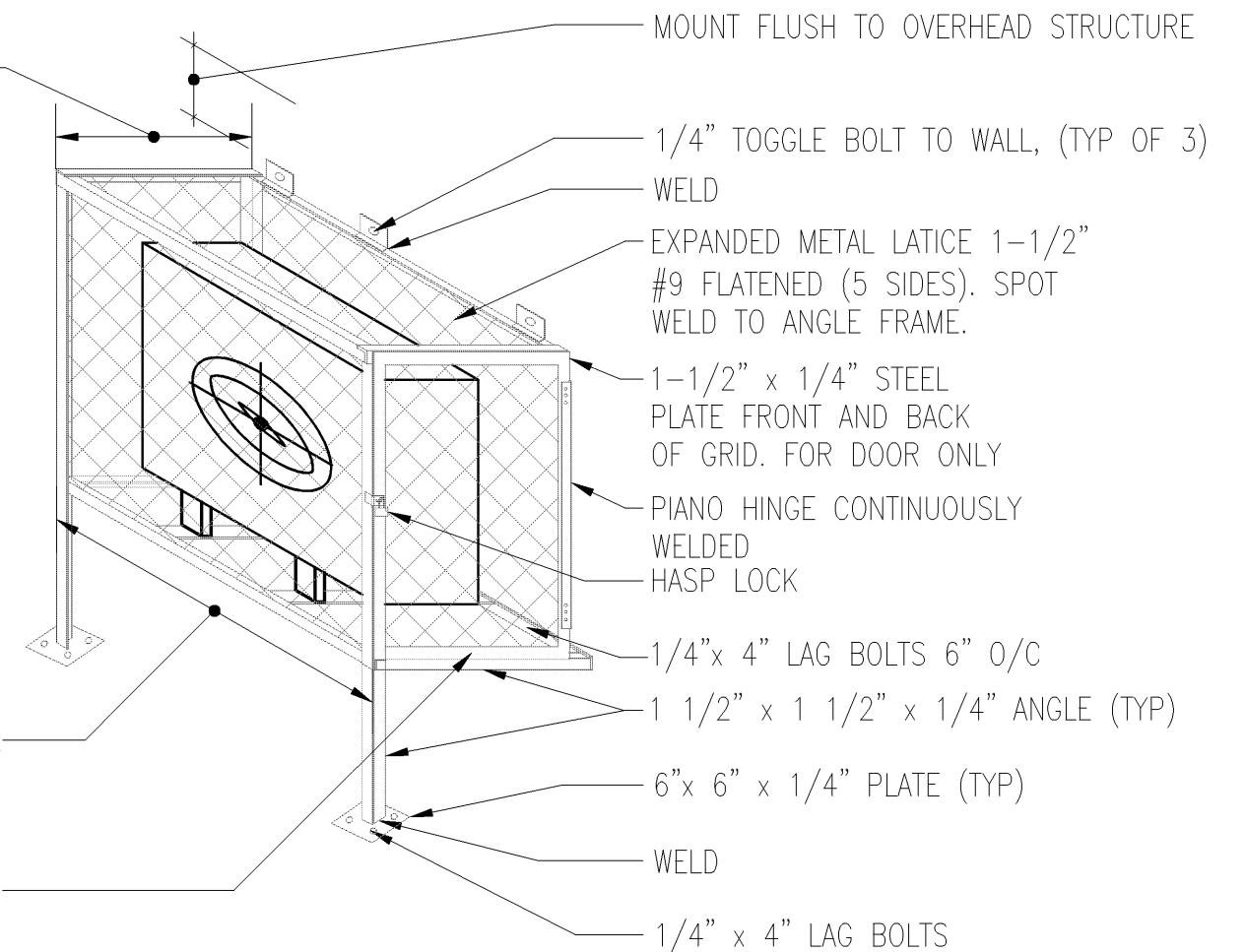
PIPE SLEEVE THRU WALL DETAIL

NO SCALE

DEPTH SHALL INCLUDE
MANUFACTURER'S CLEARANCE
FROM WALL. COORDINATE WITH
ACTUAL EQUIPMENT PURCHASED

LENGTH AS REQUIRED FOR
MANUFACTURE'S CLEARANCE.
COORDINATE WITH ACTUAL
EQUIPMENT AND ASSOCIATED
ELECTRICAL DISCONNECT SWITCH.

MAINTENANCE ACCESS
COORDINATE LOCATION WITH
ACTUAL EQUIPMENT PURCHASED

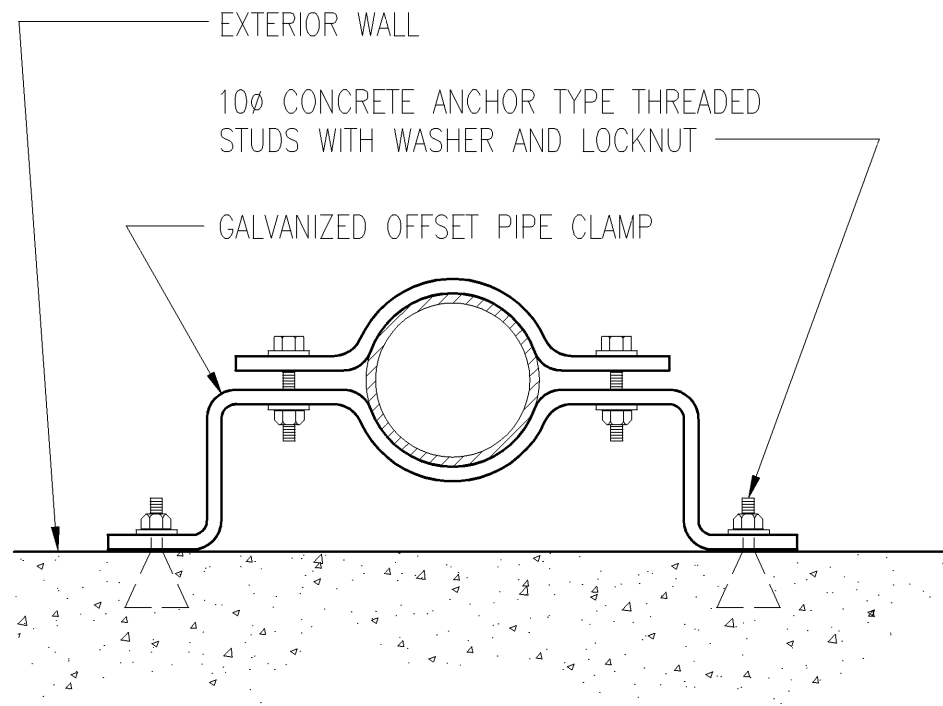


NOTE: PRIME AND PAINT ENCLOSURE AND SUPPORTS
TO MATCH EXISTING ADJACENT WALL CONDITIONS.

OUTDOOR UNIT SUPPORT AND ENCLOSURE

NO SCALE

		BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA	
		MECHANICAL DETAILS	
DES.:	JPH		DATE: 04-23-12
DR.:	JPH		SHEET: M5
CK.:	JMN		



PAINTING NOTE: PRIME AND PAINT PIPE, INSULATION AND SUPPORTS TO MATCH EXISTING ADJACENT WALLS.

PIPE WALL SUPPORT DETAIL

NO SCALE

DRAIN LINE SHALL BE AT LEAST THE SAME SIZE AS THE NIPPLE ON THE DRAIN PAN

CLEANOUT

PITCH DOWN TOWARD DRAIN

DRAIN PAN

DEPTH OF SEAL IS EQUAL TO TOTAL PRESSURE ON FAN PLUS 1"

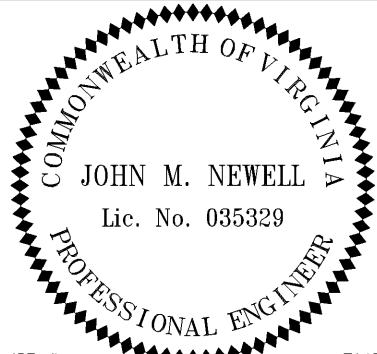

RUN AS INDICATED ON PLAN

NOTE: PVC SHOWN, COPPER SIMILAR.

PAINTING NOTE: PRIME AND PAINT PIPE, INSULATION AND SUPPORTS TO MATCH EXISTING ADJACENT WALLS.

TYPICAL CONDENSATE DRAIN TRAP

NO SCALE

		BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA	
		MECHANICAL DETAILS	
DES.:	JPH		DATE: 04-23-12
DR.:	JPH		SHEET: M6
CK.:	JMN		

JOB #

7143

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GENERAL ELECTRICAL NOTES (CONTINUED ON E2)

GENERAL: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

COORDINATION: COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT.

AS-BUILT DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE ENGINEER AT PROJECT CLOSE-OUT.

TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING #8 OR LARGER TO INSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE OWNER.

GROUNDING: PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ENTIRE ELECTRICAL SYSTEM INCLUDING EQUIPMENT FRAMES CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS, AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL POWER CONDUITS.

LABELS: PROVIDE LABELS FOR ALL CABINETS, SAFETY SWITCHES, AND MOTOR-DISCONNECT SWITCHES. LABELS SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC, PERMANENTLY ATTACHED WITH SELF-TAPPING SCREWS OR RIVETS. DO NOT USE SELF-ADHESIVE LABELS.

J-BOX LABELING: LABEL ALL JUNCTION BOXES WITH PERMANENT MARKER IDENTIFYING CIRCUIT NUMBER AND PANELBOARD OF CIRCUITS WITHIN.

PANEL DIRECTORY: PROVIDE UPDATED TYPEWRITTEN PANELBOARD DIRECTORY CARD IN EACH PANELBOARD WITH CIRCUIT LOAD INFORMATION CLEARLY IDENTIFIED.

MOTOR COORDINATION: MOTORS, MOTOR STARTERS, CONTROLLERS, INTEGRAL DISCONNECT SWITCHES, AND CONTACTORS SHALL BE PROVIDED WITH THEIR RESPECTIVE PIECES OF EQUIPMENT BY THE EQUIPMENT SUPPLIER. COMMUNICATE WITH THE TRADES PROVIDING THE EQUIPMENT, VERIFYING ALL REQUIREMENTS, PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED THEREIN, AND INSTALL MOTOR STARTERS.

MOTOR DISCONNECTS: ALL MOTORS SHALL HAVE DISCONNECTING MEANS.

MOTOR FUSE PROTECTION: WHERE FUSE PROTECTION IS SPECIFICALLY REQUIRED BY THE EQUIPMENT MANUFACTURER, PROVIDE FUSED SWITCHES IN LIEU OF NON-FUSED SWITCHES OR IN LIEU OF ENCLOSED CIRCUIT BREAKERS, OR OTHER DEVICES INDICATED.

CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FROM OTHER INVOLVED CONTRACTORS FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

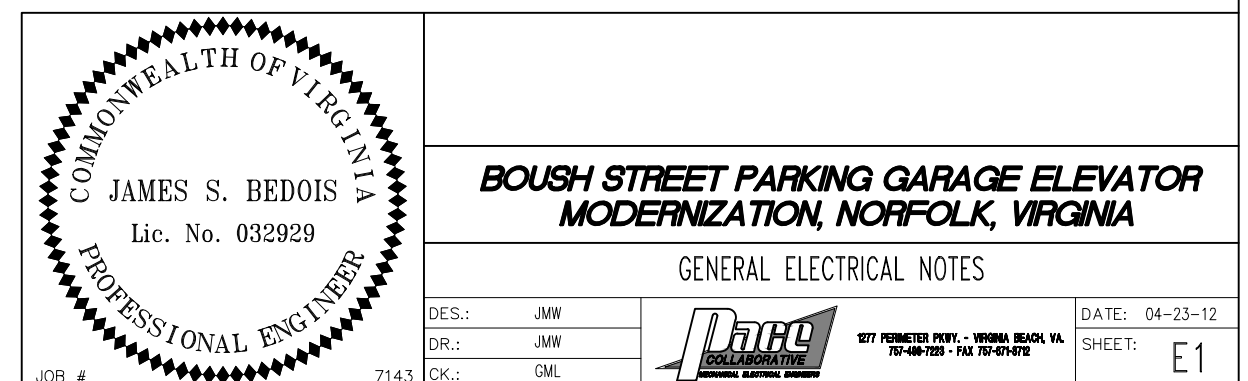
COORDINATION DETAILS: MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT AND DETERMINE THE EXACT ROUGH-IN AND CONNECTION REQUIREMENTS.

WORKING CLEARANCE: COORDINATE FINAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH MECHANICAL DUCTWORK, PIPING ETC. AND ASSURE WORKING CLEARANCE REQUIRED BY NEC WILL BE MET.

MATERIAL COORDINATION: VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING LIGHT FIXTURES OR OTHER DEVICES TO INSURE PROPER FIXTURE OR DEVICE IS FURNISHED TO MATCH CONSTRUCTION.

MOUNTING HEIGHTS: MOUNTING HEIGHTS INDICATED ARE FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE WIRING DEVICE UNLESS OTHERWISE NOTED.

BARRIERS: WHERE A MULTIPLE-GANG BOX HAS CIRCUITS OF DIFFERENT VOLTAGES OR SYSTEMS WHICH ARE REQUIRED TO BE SEPARATED, PROVIDE THE CODE-REQUIRED SEPARATION USING A FULL HEIGHT AND DEPTH BARRIER PLATE.



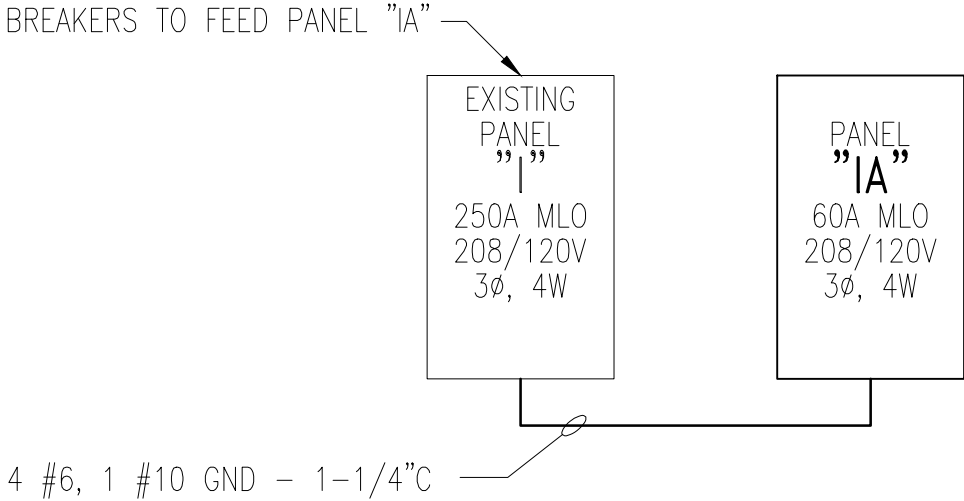
GENERAL ELECTRICAL NOTES (CONTINUED)

FIRE PROOFING: FOR ANY WALL OR FLOOR PENETRATIONS THROUGH FIRE-RATED STRUCTURES PROVIDE FIRE-PROOFING TO SEAL ALL THE PENETRATIONS AFTER THE CONDUIT HAS BEEN INSTALLED. FIRE PROOFING FOR PENETRATIONS SHALL BE UL APPROVED PER THE PENETRATION MADE IN ORDER TO MAINTAIN FIRE-RATED INTEGRITY OF THE STRUCTURE.

CLEAN UP: ON PROJECT CLOSE-OUT CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, LAMPS AND LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES AND PLATES. REPLACE ALL INOPERATIVE LAMPS.

FIRE ALARM COORDINATION: THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE FIRE ALARM SYSTEM PROVIDER AND PROVIDE POWER CONNECTIONS TO ALL COMPONENTS WHETHER SHOWN OR NOT. MANUFACTURERS REQUIRE VARYING QUANTITIES OF POWER CONNECTIONS FOR EQUIPMENT LIKE EXPANDER PANELS AND POWER SUPPLIES. THESE DEVICES ARE DEPENDENT UPON THE SPECIFIC MANUFACTURERS SYSTEM. THE FIRE ALARM SYSTEM SUPPLIER SHALL NOTIFY THE OTHER APPROPRIATE SUB-CONTRACTORS ABOUT THESE REQUIREMENTS AND CONNECTION SHALL BE PROVIDED AS PART OF THE PROJECT.

PROVIDE 50A-3P IN SIEMENS TYPE SI PANELBOARD. USE TYPE BL, BLH, HBL, BLF, OR BLHF CIRCUIT BREAKERS TO FEED PANEL "IA"



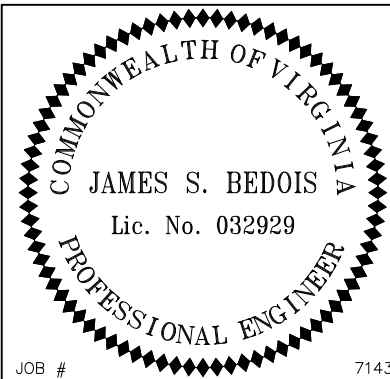
POWER RISER DIAGRAM – NEW WORK

NO SCALE

ABBREVIATIONS

A	AMPERE	GFI	GROUND FAULT INTERRUPTER	RECEPT	RECEPTACLE
AFF	ABOVE FINISHED FLOOR	GND	GROUND	TBB	TELEPHONE BACKBOARD
C	CONDUIT	HP	HORSE POWER	TYP	TYPICAL
CFL	COMPACT FLUORESCENT LAMP	KVA	KILO-VOLT-AMPERES	UON	UNLESS OTHERWISE NOTED
CKT	CIRCUIT	KW	KILO-WATTS	V	VOLT(S)
CB	CIRCUIT BREAKER	MCA	MINIMUM CIRCUIT AMPS	W	WATTS/WIRE
DSS	DUCTLESS SPLIT SYSTEM	NEC	NATIONAL ELECTRICAL CODE	WP	WEATHERPROOF
EBU	EMERGENCY BATTERY UNIT	NF	NON-FUSED		
ECB	ENCLOSED CIRCUIT BREAKER	NTS	NOT TO SCALE		
EF	EXHAUST FAN	OC	ON CENTER		
ETR	EXISTING TO REMAIN	P	POLE		
FLA	FULL LOAD AMPS	ø	PHASE		

PANELBOARD IA SCHEDULE														
SEE POWER RISER DIAGRAM FOR RATINGS														
LOAD SERVED	LOAD (AMPS)			BKR TRIP	CKT NO.	PHASE			CKT NO.	BKR TRIP	LOAD (AMPS)			LOAD SERVED
	A	B	C			A	B	C			A	B	C	
DSS-1A	9.5			15/2P	1	●			2	20/1P	3.0			SUMP RECEPT.
		9.5					●		4	20/1P		3.0		SUMP RECEPT.
SPARE				20/1P	5			●	6	20/1P			3.0	SUMP RECEPT.
SPARE				20/1P	7	●			8	20/1P	3.0			SUMP RECEPT.
SPARE				20/1P	9		●		10	20/1P		5.0		CAB #3 LTG
SPARE				20/1P	11			●	12	20/1P				SPARE
SPARE				20/1P	13	●			14	20/1P				SPARE
SPARE				20/1P	15		●		16	20/1P				SPARE
SPARE				20/1P	17			●	18	20/1P				SPARE
SPARE				20/1P	19	●			20	20/1P				SPARE
SPARE				20/1P	21			●	22	20/1P				SPARE
SPARE				20/1P	23			●	24	20/1P				SPARE
TOTAL	9.5	9.5	0.0								6.0	8.0	3.0	TOTAL
TOTAL CONNECTED AMPS A: 15.5 B: 17.5 C: 3.0														



**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

GENERAL ELECTRICAL NOTES AND ABBREVIATIONS














DES.:	JMW
DR.:	JMW
CK.:	GML








DATE: 04-23-12
SHEET: E2

DATE COLLABORATIVE
COMMERCIAL ELECTRICAL ENGINEERS

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ELECTRICAL LEGEND

	FLUORESCENT LIGHTING FIXTURE
	WALL MOUNTED LIGHTING FIXTURE
	EMERGENCY BATTERY LIGHTING UNIT, CONNECT AHEAD OF LOCAL SWITCH.
	SINGLE POLE SWITCH, 20A, 120/277V, 48" AFF UON
	DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 18" AFF, UON
	DUPLEX GFI RECEPTACLE 20A, 120V W/ WEATHERPROOF COVER, 18" AFF, UON
	SINGLE RECEPTACLE 20A, 120V WITH WEATHERPROOF COVER, 48"AFF, UON
	EQUIPMENT CONNECTION
	JUNCTION BOX
	SAFETY SWITCH, 60A-3P, FU @ 30A, 3R
	SWITCH RATING NUMBER OF POLES FUSE RATING (NF INDICATES NON-FUSED) NEMA ENCLOSURE IF OTHER THAN NEMA 1
	ENCLOSED CIRCUIT BREAKER, 60A-3P, 3R
	BREAKER TRIP RATING NUMBER OF POLES NEMA ENCLOSURE IF OTHER THAN NEMA 1
	ELEVATOR CONTROL SWITCH , CUTLER-HAMMER "ELEVATOR CONTROL SWITCH" OR APPROVED EQUAL. PROVIDE WITH FULL CAPACITY NEUTRAL AND ALL AVAILABLE OPTIONS. COORDINATE WITH ELEVATOR EQUIPMENT PROVIDED AND WITH EXISTING FIRE ALARM EQUIPMENT.
	ELECTRICAL PANELBOARD

	ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR AND 1 #12 GROUNDING CONDUCTOR IN 3/4" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS SHALL BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. NEUTRAL AND GROUNDING CONDUCTORS SHALL BE SHARED AS ALLOWED BY THE NEC. CONDUIT LARGER THAN 3/4" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.
	TELEPHONE SYSTEM OUTLET, 18" AFF, UON, WITH 3/4"C STUBBED ABOVE ACCESSIBLE CEILING.
	FIRE ALARM SYSTEM HEAT DETECTOR, CEILING MOUNTED
	FIRE ALARM SYSTEM PHOTOELECTRIC SMOKE DETECTOR, CEILING MOUNTED
	RELAY MODULE
	NEW WORK NOTE SYMBOL
	DEMOLITION NOTE SYMBOL

COMMONWEALTH OF VIRGINIA

JAMES S. BEDOIS

Lic. No. 032929

PROFESSIONAL ENGINEER

JOB #7143

BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA

ELECTRICAL LEGEND

DES.:JMW

DR.:JMW

CK.:GML

DATE: 04-23-12

SHEET: E3

DATE

COLLABORATIVE

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ELEVATOR FIRE ALARM SEQUENCE

- Ⓐ FIRE ALARM ANNUNCIATION

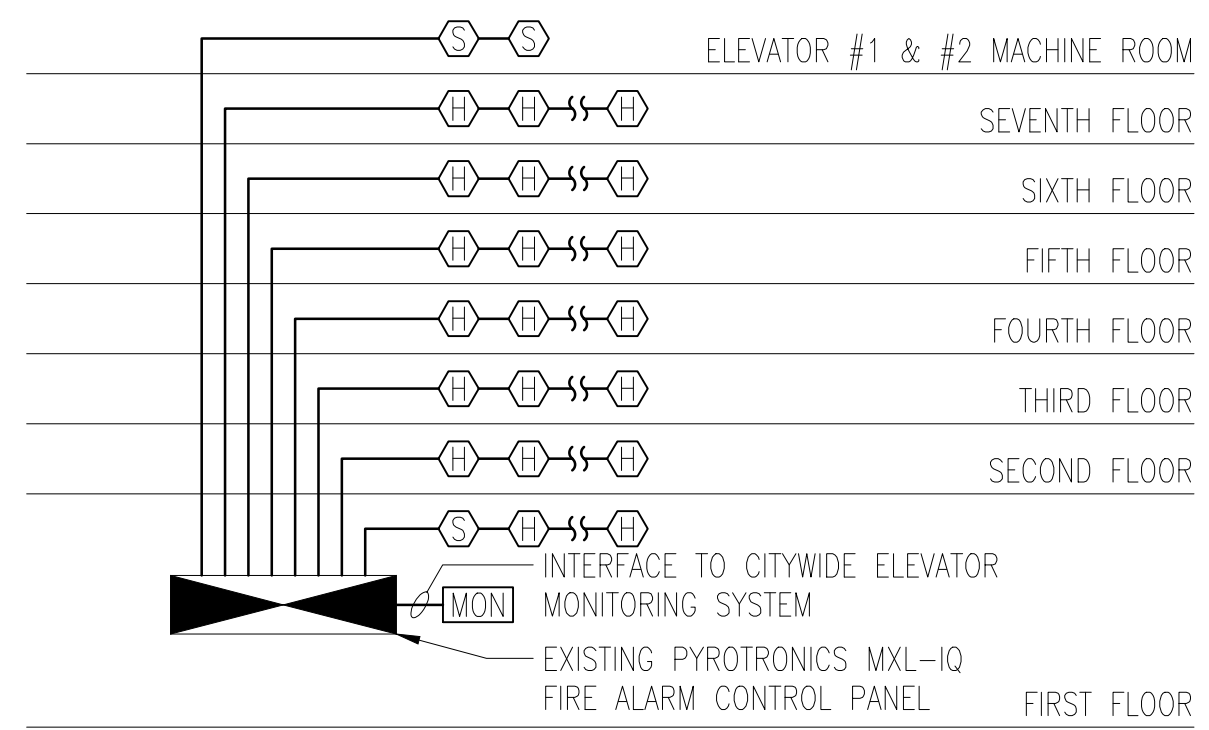
 - SMOKE DETECTOR IN ELEVATOR MACHINE ROOM OR SHAFT (ELEVATOR #3 ONLY).
 - HEAT DETECTOR IN ELEVATOR LOBBY – EACH FLOOR.

ANY ONE OF THE DETECTORS WILL SOUND THE FIRE ALARM SYSTEM.
- Ⓑ ELEVATOR RECALL (EMERGENCY MODE)

 - SMOKE DETECTOR IN ELEVATOR MACHINE ROOM.
 - HEAT DETECTOR IN ELEVATOR LOBBY – EACH FLOOR.

HEAT DETECTOR ON FIRST FLOOR IN THE ELEVATOR LOBBY WILL SIGNAL THE ELEVATOR CONTROLLER TO SEND THE ELEVATOR TO THE ALTERNATE FLOOR (SECOND FLOOR) ALL OTHER REMAINING SMOKE OR HEAT DETECTORS WILL SIGNAL THE ELEVATOR CONTROLLER TO SEND THE ELEVATOR TO THE DESIGNATED FLOOR (FIRST FLOOR).
- Ⓒ RED HAT FLASHING

 - SMOKE DETECTOR IN ELEVATOR MACHINE ROOM OR SHAFT.
 - PROVIDE INPUT TO ELEVATOR CONTROLLER FOR RED HAT LIGHT ACTIVATION.

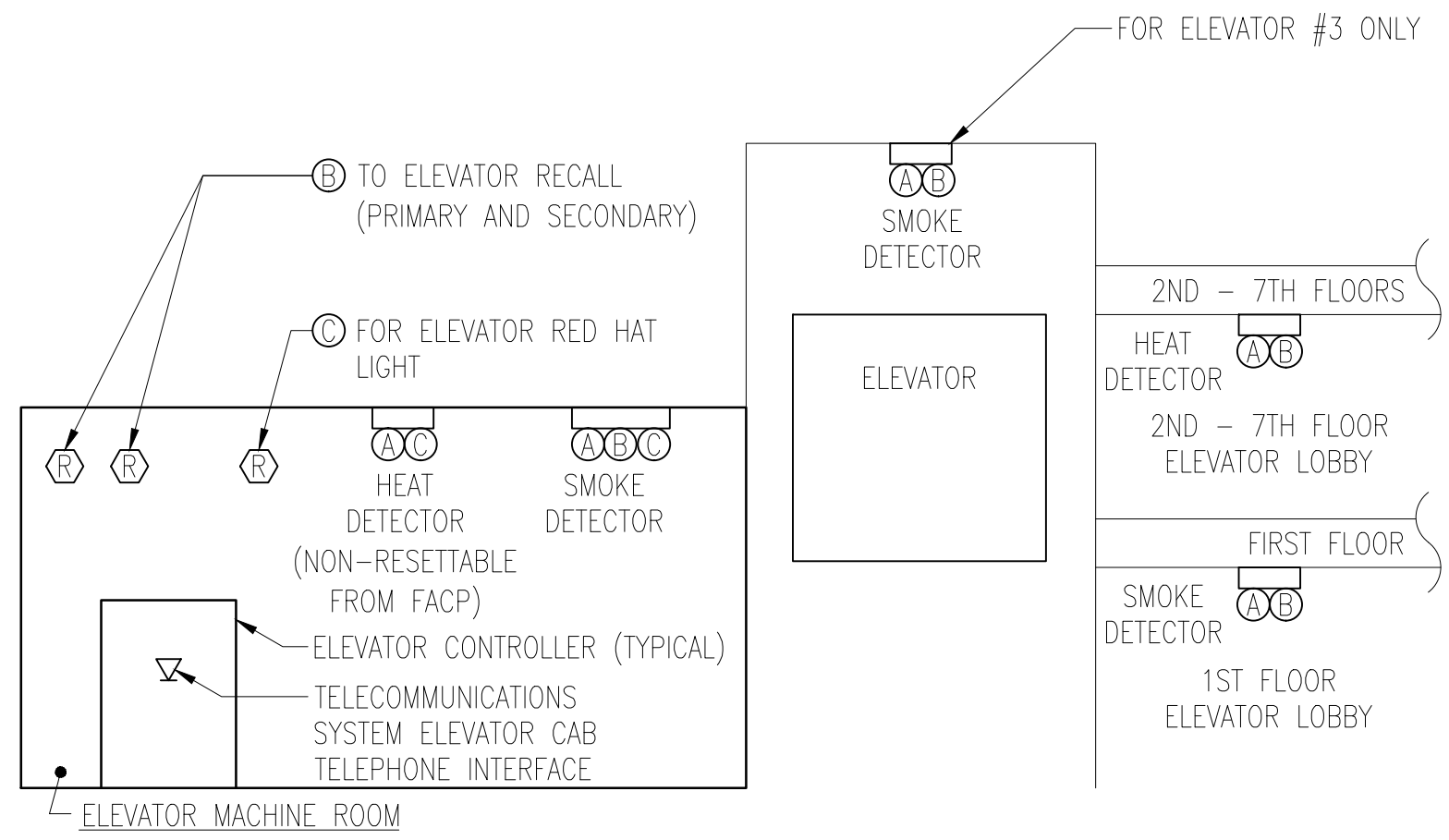


NOTES:

1 ACTUAL QUANTITY OF DEVICES TO BE DETERMINED FROM FLOOR PLAN DRAWINGS.

FIRE ALARM RISER DIAGRAM – NEW WORK

NO SCALE



ELEVATOR RECALL RISER DIAGRAM

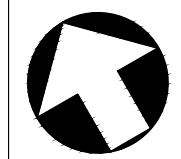
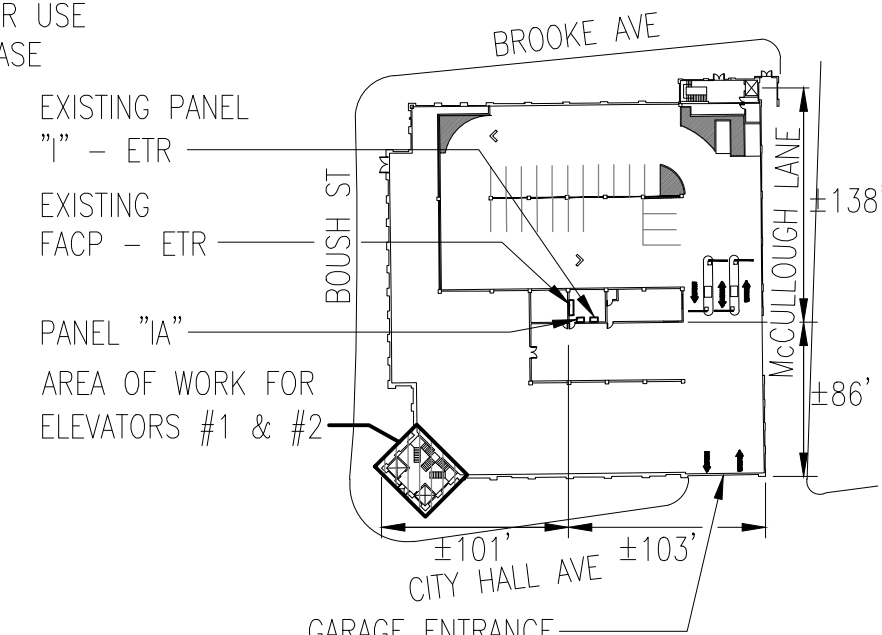
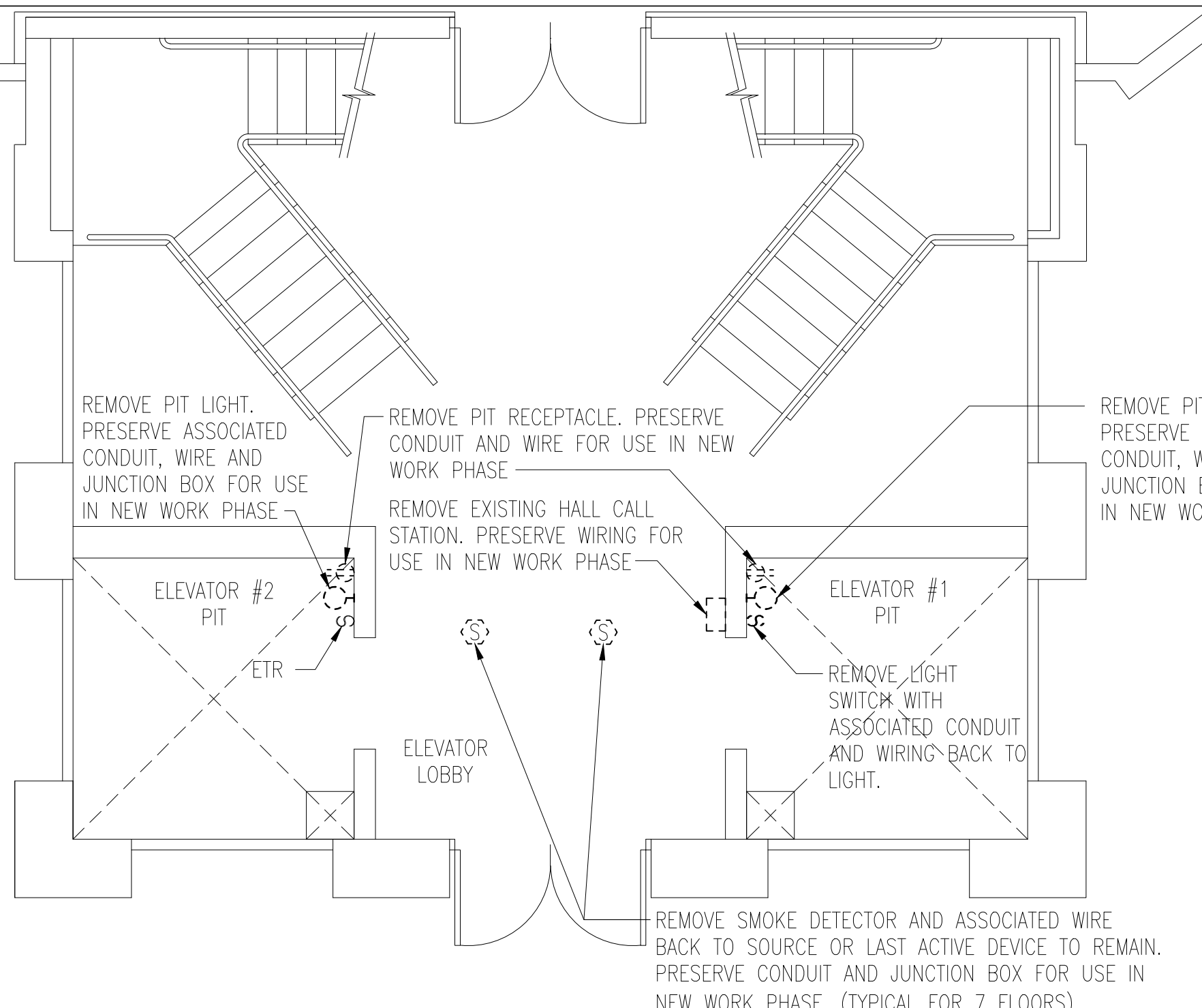
NO SCALE

JAMES S. BEDOIS
Lic. No. 032929
PROFESSIONAL ENGINEER

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

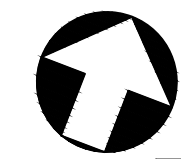
FIRE ALARM RISER DIAGRAM

DES.:	JMW	<p>1277 PERIMETER PKWY., - VIRGINIA BEACH, VA. 757-400-7229 - FAX 757-071-0712</p>	DATE: 04-23-12
DR.:	JMW		SHEET: E4
CK.:	GML		



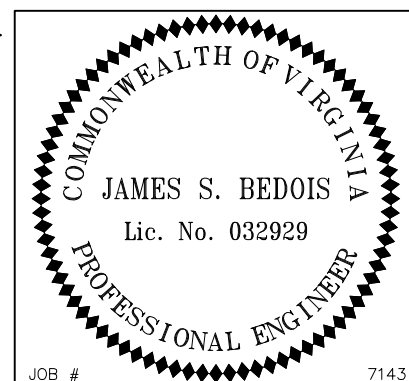
ELECTRICAL ELEVATOR #1 AND #2 PIT PLAN - DEMOLITION

SCALE: 1/4" = 1'-0"



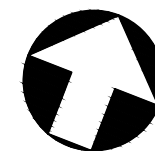
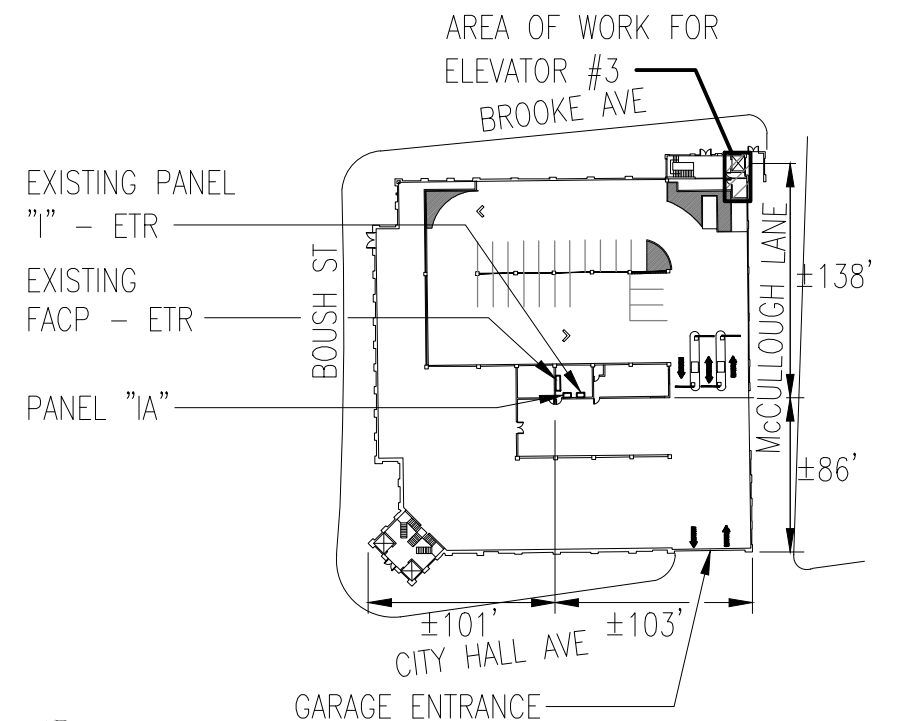
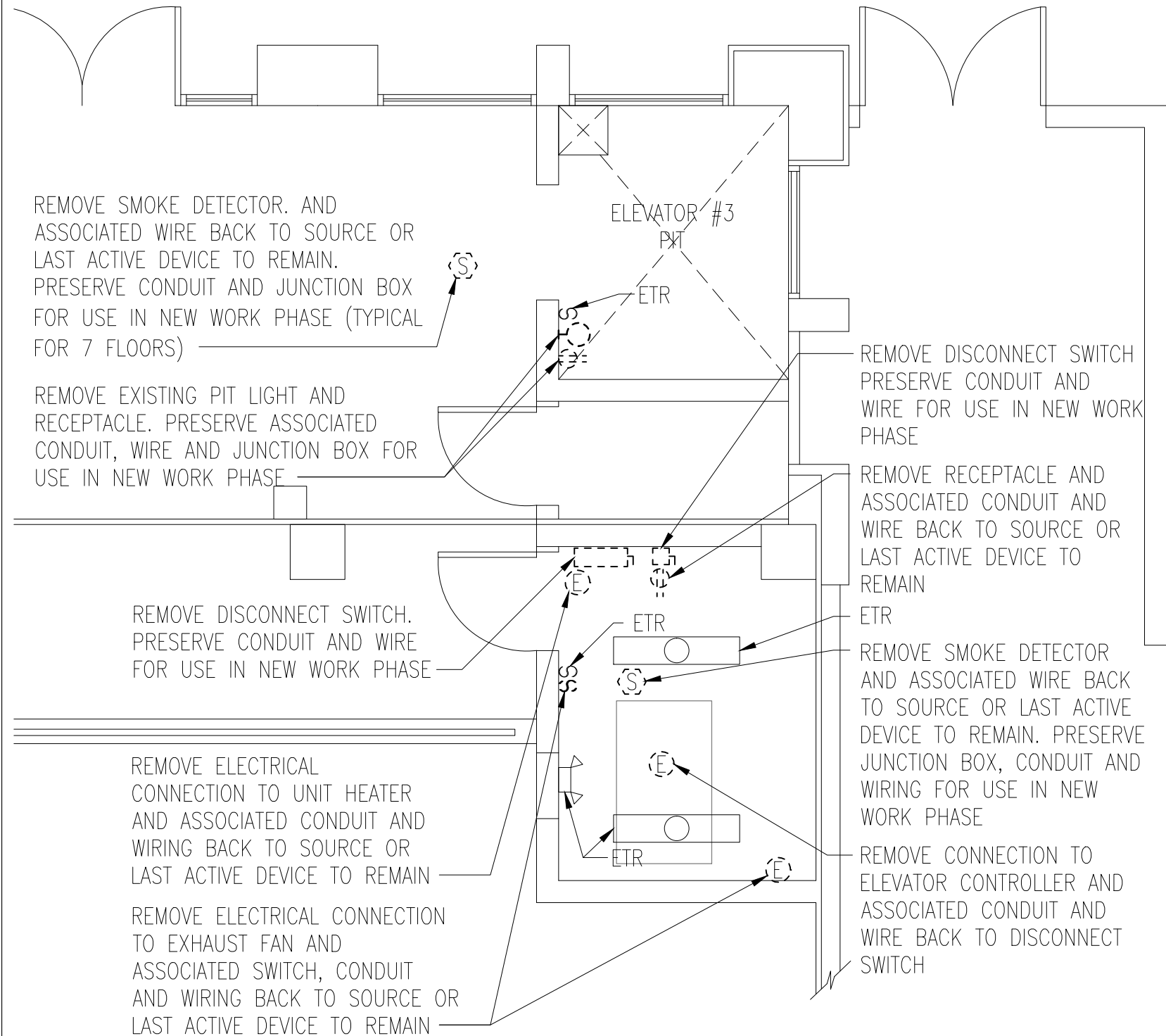
KEYPLAN - LEVEL 1

NO SCALE



GRAPHIC SCALE		
1/4" = 1'-0"		
BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA		
ELECTRICAL ELEVATOR #1 AND #2 PIT PLAN - DEMOLITION		
DES.: JMW		DATE: 04-23-12
DR.: JMW		SHEET: E5
CK.: GML		

1277 PERIMETER PKWY. - VIRGINIA BEACH, VA.
757-400-7229 - FAX 757-671-8782



KEYPLAN - LEVEL 1

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0" 5' 0' 5'

BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA

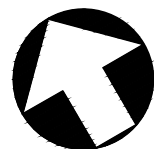
ELECTRICAL ELEVATOR #3 PIT PLAN - DEMOLITION

DES.: TBG
DR.: JMW
CK.: GML



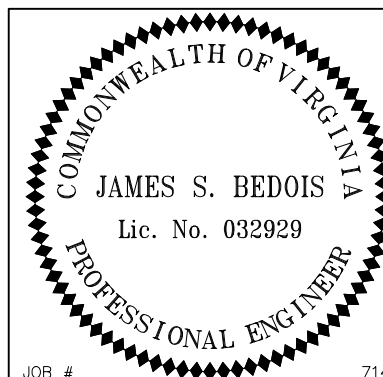
1277 PERIMETER PKWY., - VIRGINIA BEACH, VA.
757-400-7229 - FAX 757-071-0712

DATE: 04-23-12
SHEET: E6



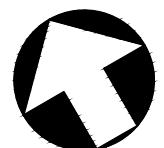
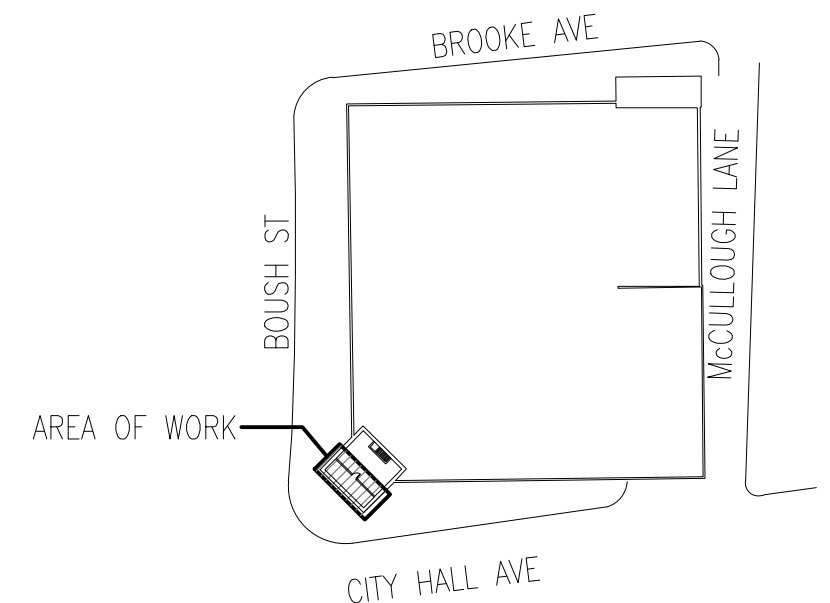
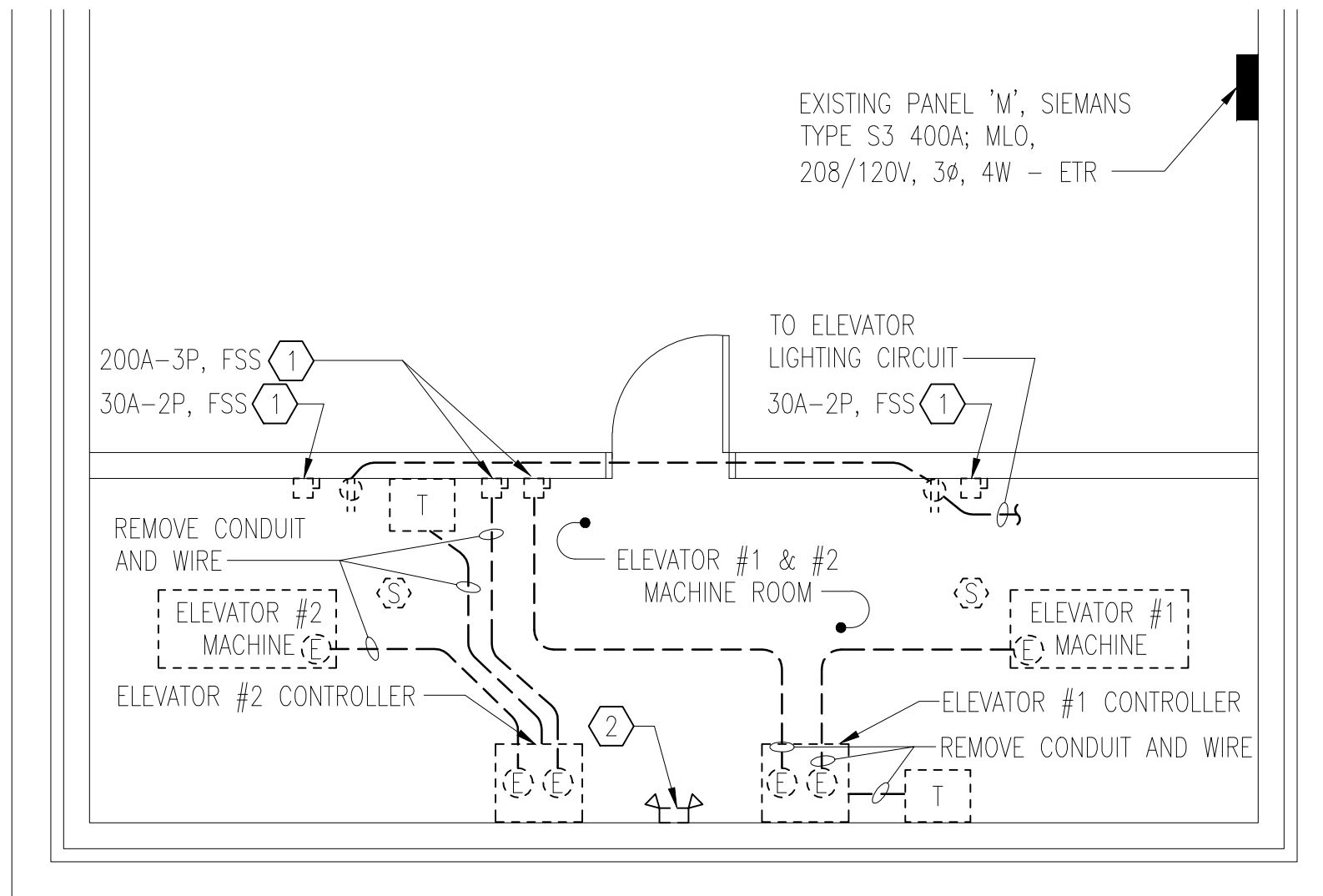
ELECTRICAL ELEVATOR #3 PIT PLAN - DEMOLITION

SCALE: 1/4" = 1'-0"



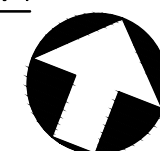
JOB #

7143



ELECTRICAL ELEVATOR #1 AND #2 MACHINE RM PLAN - DEMOLITON

SCALE: 1/4" = 1'-0"

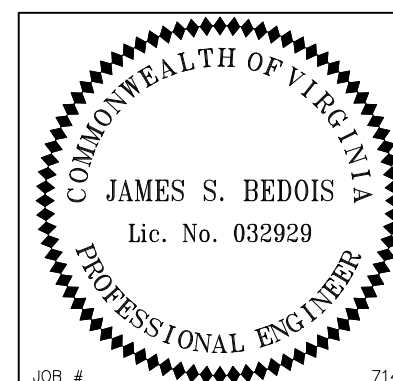


KEYPLAN - LEVEL 8

NO SCALE

NOTES THIS SHEET

- ① REMOVE EXISTING ELEVATOR EQUIPMENT SAFETY SWITCH, RETAIN CIRCUIT FOR RE-USE.
- ② REMOVE EBU. PRESERVE EXISTING CONDUIT AND WIRING FOR USE IN NEW WORK PHASE.



JOB #

7143

GRAPHIC SCALE



BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA

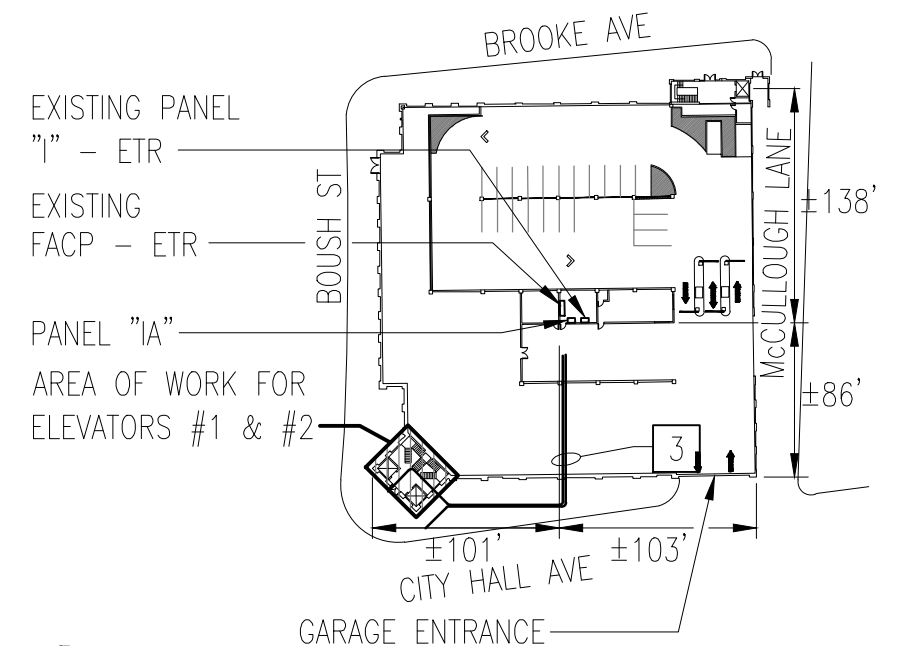
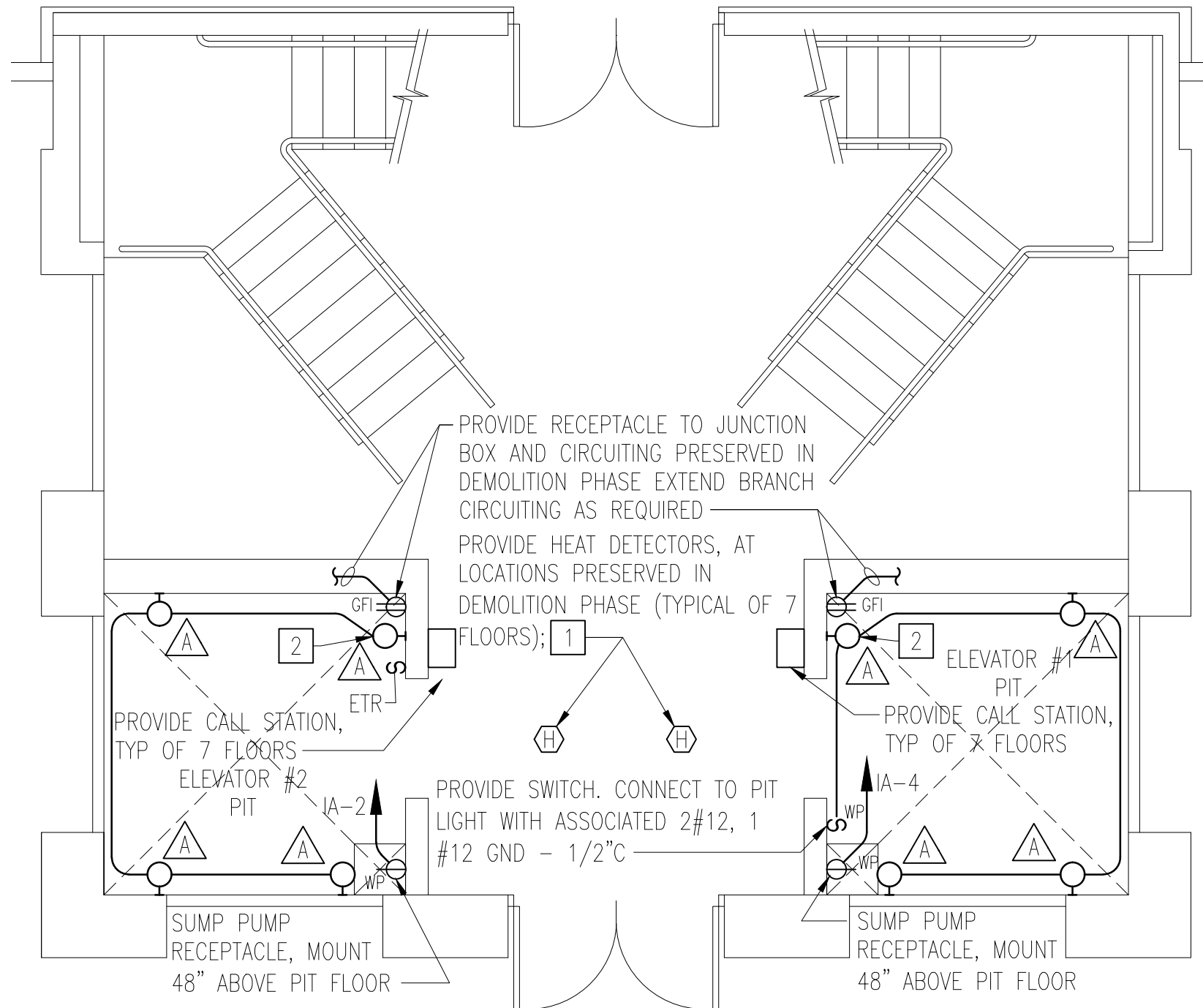
ELECTRICAL ELEVATOR #1 AND #2 MACHINE RM PLAN - DEMOLITION

DES.: JMW
DR.: JMW
CK.: GML



1277 PERIMETER PKWY., - VIRGINIA BEACH, VA.
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DATE: 04-23-12
SHEET: E7



KEYPLAN - LEVEL 1

NO SCALE

GRAPHIC SCALE



BOUSH STREET PARKING GARAGE ELEVATOR MODERNIZATION, NORFOLK, VIRGINIA

ELECTRICAL ELEVATOR #1 AND #2 PIT PLAN - NEW WORK

DES.:

JMW

DR.:

JMW

CK.:

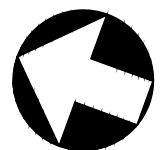
GML



1277 PERIMETER PKWY., - VIRGINIA BEACH, VA.
757-400-7229 - FAX 757-671-8712

DATE: 04-23-12

SHEET: E8

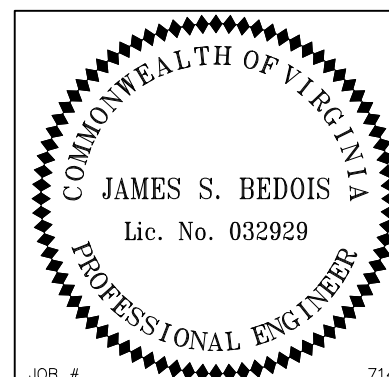


ELECTRICAL ELEVATOR #1 AND #2 PIT PLAN - NEW WORK

SCALE: 1/4" = 1'-0"

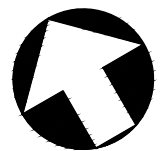
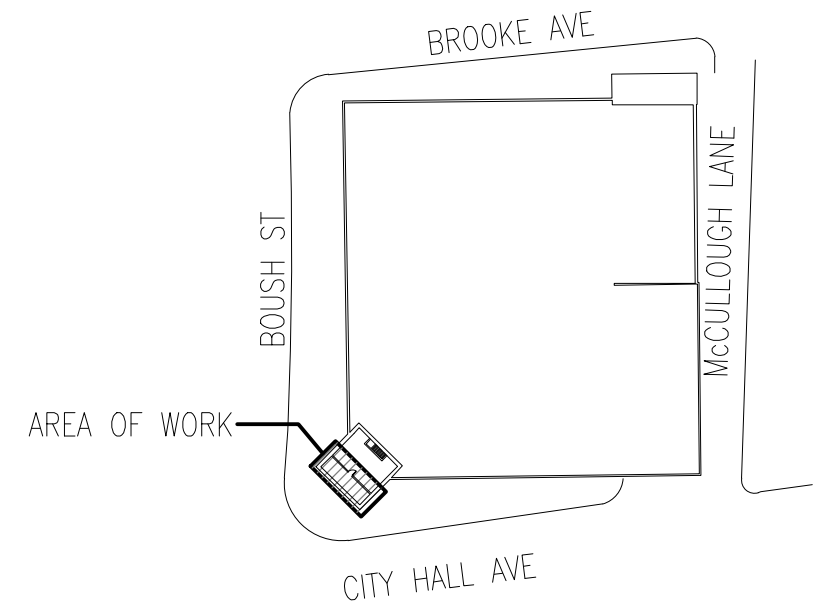
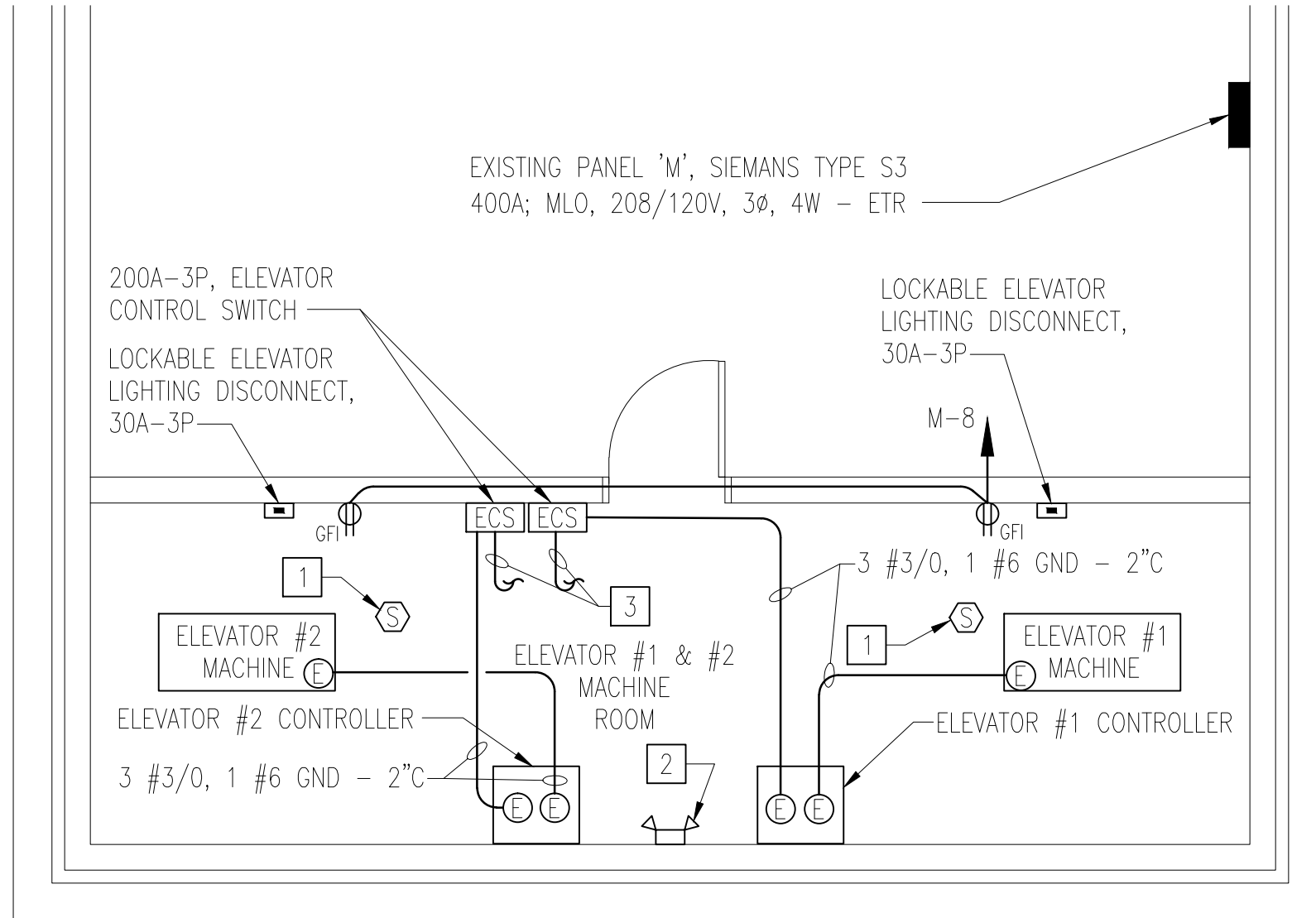
NOTES THIS SHEET

- 1 DEVICE ACTIVATION SHALL SIGNAL THE ELEVATOR CONTROLLER TO PERFORM ELEVATOR RECALL.
- 2 PROVIDE FIXTURE AT LOCATION PRESERVED IN DEMOLITION PHASE. EXTEND BRANCH CIRCUITING AS REQUIRED.
- 3 ROUTE CONDUIT AS HIGH AS POSSIBLE. MOUNT ON SIDE OF STRUCTURAL BEAM WHERE POSSIBLE.



JOB #

7143

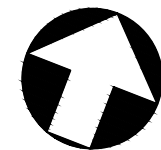


ELECTRICAL ELEVATOR #1 AND #2 MACHINE RM PLAN – NEW WORK

SCALE: 1/4" = 1'-0"

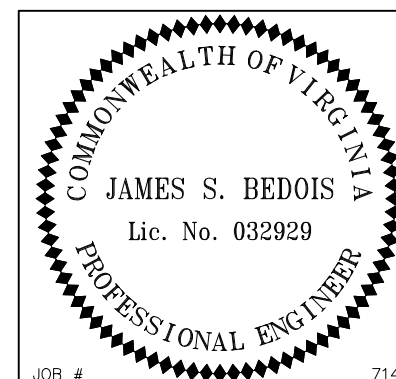
NOTES THIS SHEET

- 1 CONTRACTOR IS TO VERIFY SMOKE DETECTORS PROPER FUNCTIONALITY. DEVICE ACTIVATION SHALL SIGNAL THE ELEVATOR CONTROLLER TO PERFORM ELEVATOR RECALL.
- 2 PROVIDE AND INSTALL EBU TO CIRCUITING PRESERVED IN DEMOLITION PHASE.
- 3 CONNECT TO EXISTING CIRCUIT MADE AVAILABLE BY DEMOLITION.



KEYPLAN – LEVEL 8

NO SCALE



JOB #

7143

GRAPHIC SCALE

1/4" = 1'-0" 5' 0' 5'

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

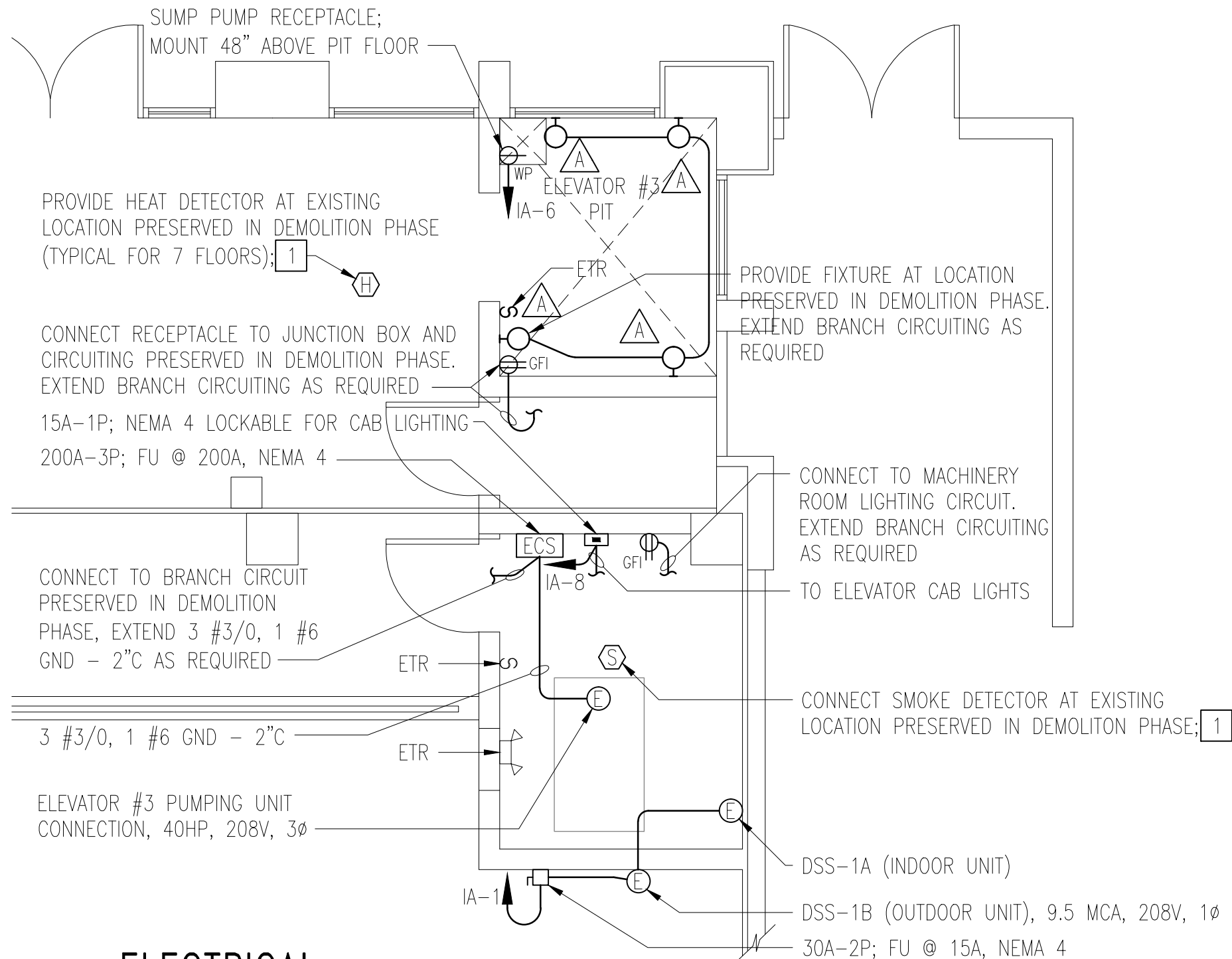
ELECTRICAL ELEVATOR #1 AND #2 MACHINE RM PLAN – NEW WORK

DES.: JMW
DR.: JMW
CK.: GML



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DATE: 04-23-12
SHEET: E9



ELECTRICAL ELEVATOR #3 MACHINE RM AND PIT PLAN - NEW WORK

SCALE: 1/4" = 1'-0"

NOTES THIS SHEET

- 1 DEVICE ACTIVATION SHALL SIGNAL THE ELEVATOR CONTROLLER TO PERFORM ELEVATOR RECALL.

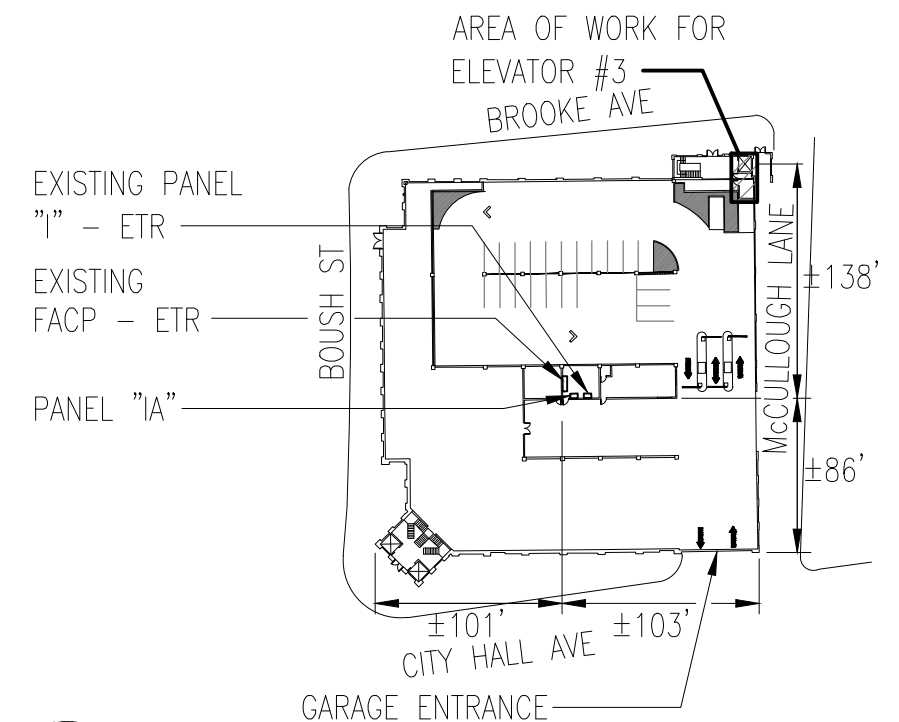
CONNECT TO MONITORING SYSTEM VIA
ETHERNET. FIBER OPTIC CABLE BY
OWNER. CONTRACTOR SHALL PROVIDE
LINE DRIVERS AND COMMUNICATIONS
CARDS AS REQUIRED

ELEVATOR #3
CONTROLLERS

HANDHELD OR MACHINE
ROOM CIRCUIT DISPLAY
TERMINAL DIRECT WIRED

MONITORING/CONTROL PANEL DIAGRAM

NO SCALE



KEYPLAN - LEVEL 1

NO SCALE

GRAPHIC SCALE

1/4" = 1'-0" 5' 0' 5'

**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

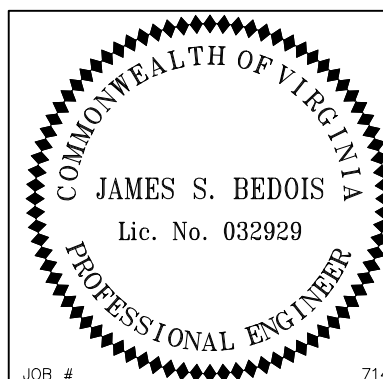
ELEC ELEVATOR #3 MACH RM AND PIT PLAN - NEW WORK

DES.: TBG
DR.: JMW
CK.: GML



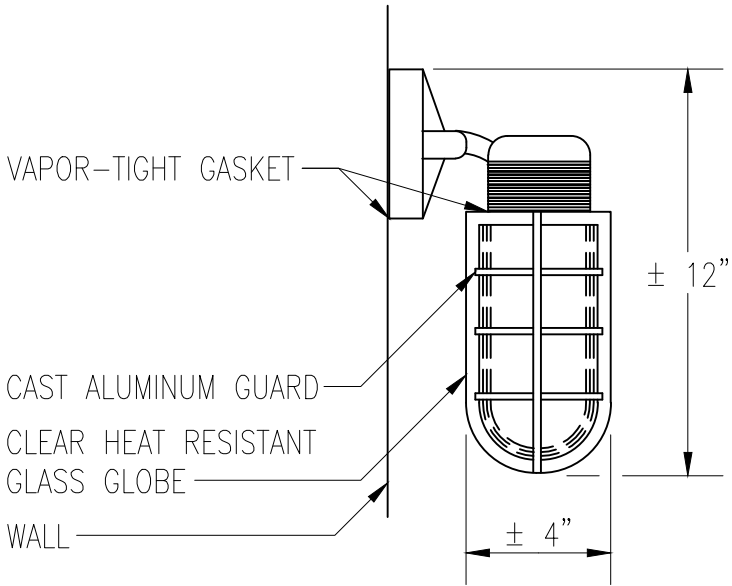
1277 PERIMETER PKWY., - VIRGINIA BEACH, VA.
757-400-7229 - FAX 757-671-8712

DATE: 04-23-12
SHEET: E10



JOB #

7143



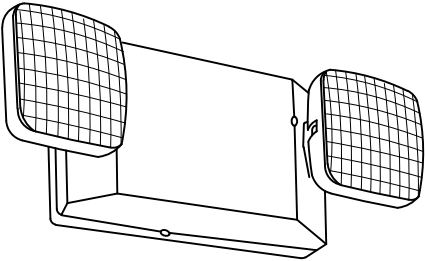
LUMINAIRE REQUIREMENTS

- 1. HOUSING: DIE CAST ALUMINUM.
- 2. GLOBE: IMPACT-RESISTANT GLASS.
- 3. GUARD: ONE PIECE CONSTRUCTED ALUMINUM. U.L. LISTED FOR DAMP OR WET LOCATIONS.
- 4. FINISH: POWDER COAT GREY.
- 5. ONE PIECE SILICONE GASKET.

DETAIL BASED ON LUMARK, "VS" SERIES

TYPE	LAMP #	LAMP TYPE	INPUT WATTS	VOLTS	MOUNTING
	1	42W CF	48	120	SURFACE, WALL MOUNT 58" AFF

NON-METALLIC VAPORTIGHT FIXTURE



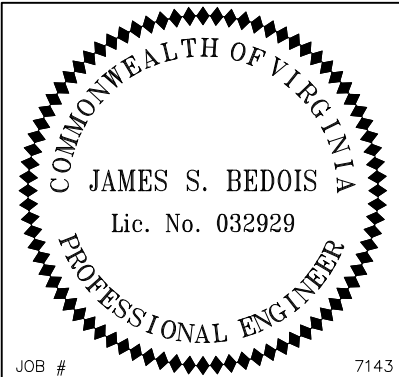
LUMINAIRE REQUIREMENTS

- 1. HOUSING SHALL BE IMPACT RESISTANT, SCRATCH RESISTANT, UV STABLE, THERMOPLASTIC.
- 2. LENS SHALL BE HIGH IMPACT POLYCARBONATE WITH SWIVEL MOUNTING FOR FULL RANGE OF LAMP HEAD ADJUSTMENT.
- 3. HALOGEN LAMPS SHALL BE RATED 12 WATTS EACH.
- 4. BATTERY SHALL BE SEALED, MAINTENANCE-FREE WITH POWER CAPACITY FULLY RATED IN ACCORDANCE WITH THE NEC AND NFPA 101. BATTERY VOLTAGE RATING SHALL BE 6 VOLTS OR 12 VOLTS. PROVIDE AUTOMATIC VOLTAGE DISCONNECT FEATURE FOR DEEP DISCHARGE PROTECTION.
- 5. CHARGER SHALL BE ELECTRONIC, AUTOMATIC, CURRENT LIMITING WITH SHORT CIRCUIT PROTECTION, THERMAL PROTECTION, A RED LED PILOT LAMP, AND A TEST SWITCH. PROVIDE CHARGER WITH A FILTERED OUTPUT AND OPERATIONAL FEATURES THAT MAXIMIZE THE LIFE AND OPERATION OF THE BATTERY.
- 6. REMOTE HEADS SHALL BE PROVIDED WHERE INDICATED. REMOTE HEADS SHALL MATCH APPEARANCE, COLOR, FINISH AND LAMP WATTAGE OF THE MAIN UNIT.

DETAIL BASED ON COOPER, "CC7" SERIES

TYPE	LAMP #	LAMP TYPE	INPUT WATTS	VOLTS	MOUNTING
	2	HALOGEN	3	120	SURFACE WALL, MOUNT 7'-0" AFF

EMERGENCY BATTERY UNIT



**BOUSH STREET PARKING GARAGE ELEVATOR
MODERNIZATION, NORFOLK, VIRGINIA**

ELECTRICAL LIGHTING DETAILS

DES.:	JMW		1277 PERIMETER PKWY. - VIRGINIA BEACH, VA. 757-400-7220 - FAX 757-071-0702	DATE:	04-23-12
DR.:	GVB			SHEET:	E11
CK.:	GML				